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Zoning Compliance Narrative

Zoning Compliance Narrative

This section briefly describes how the Proponent has fulfilled the various submission requirements as described in Article 5 - Special Permits, Special Permits with Site Plan Review, Site Plan Approval and Variances of the Somerville Zoning Ordinance adopted March 23, 1990 as amended through June 8, 2006.

ARTICLE 5: SPECIAL PERMITS, SPECIAL PERMITS WITH SITE PLAN REVIEW, SITE PLAN APPROVAL AND VARIANCES

5.2.3.1 Name, addresses, and telephone numbers of the applicant, the owner, if other than the applicant, and other agents for the applicant, such as the architect, engineer and/or attorney and the name and address of the proposed project:

Proponent:

FR Sturtevant Street LLC
1262 East Jefferson Street
Rockville, MD 20852
tel: (301) 998-8100
contact: Robert Walsh, (617) 684-1500

Proponent's Engineer:

Vanasse Hangen Brustlin, Inc.
101 Walnut Street
Watertown, MA 02471
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contact: Kendall Cardwell, PE

Proponent's Attorney:

Goodwin Procter LLP
Exchange Place
53 State Street
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contact: R. Jeffrey Lyman, Esq.

Proponent's Architect:

Street-Works
30 Glenn Street
White Plains, NY 10603
tel: (914) 949-6505
contact: Eric Fang

IKEA's Engineer:

Coler & Colantonio, Inc.
10 Accord Park Drive
Norwell, MA 02061
tel: (781) 982-5400
contact: Ken Caputo

IKEA's Architect:

Greenberg Farrow Architecture
1755 The Exchange SE
Atlanta, GA 30339
tel: (770) 303-1033
contact: Rick Johnson

IKEA's Sign Consultant:

I.D. Associates, Inc.
1771 Industrial Road
Dothan, AL 36303
tel: (334) 836-1400
contact: Rosalyn Holderfield

5.2.3.2 Plot plan certified by land surveyor indicating total land area, boundaries, angles and dimensions of the site and a north arrow:

The plan set contains an Existing Conditions Plan of Land, certified by Russell J. Bousquet, PLS, on five sheets (Sheets SV-1, SV-2, SV-3, SV-4 and SV-5) which contain the land areas, boundaries, angles and dimensions of the site and a north arrow.

5.2.3.3 Scaled site plan(s) certified by a registered land surveyor, architect, landscape architect or engineer showing:

a) Present and proposed use of the existing land and existing buildings, if any:

The various sheets of the site plan set and Assembly Square Drive plan set have been certified (stamped) by a registered land surveyor, engineer and landscape architect, as appropriate.

The Existing Conditions Plan of Land shows existing buildings and uses. The Project site contains all or part of five existing buildings housing entertainment/retail and industrial uses, which will be demolished in preparation of the new construction.

The proposed use, an IKEA retail store and its associated site improvements, is shown on the Overall Site Plan, Layout and Materials Plan, Grading and Drainage Plan, and the Utility Plan, all certified by Kendall Cardwell, PE and on the Landscape Plan, certified by Frank Stewart, RLA. Building elevations are shown on "IKEA Elevations", prepared by Greenberg Farrow Architects. Surface parking lot lighting levels are shown on the Site Lighting Plan prepared by Engineering Advantage, Inc.

b) Dimensions of existing and proposed building(s) or other structures including height, setback(s) from property lines and total square footages of all floors:

The five existing buildings to be demolished are all one-story, concrete block/brick and metal construction. The locations of the existing buildings relative to the Project property limits are shown on the Existing Conditions Plan of Land.

The proposed IKEA store ground floor footprint, the layout of ground level parking under the building and outline of the building above are shown on the Layout and Materials Plan. The total square footage of all floors of the IKEA store (ground floor access to street and parking, second floor vertical transportation and access to second level parking, and two levels of retail store) is 340,000-square feet. The IKEA store building height is 66'-6" (sixty six feet and 6 inches). The minimum building setback from the street (Assembly Square Drive) is less than 1.0 foot.

A Zoning Summary chart listing the required and provided dimensional requirements is located on the Layout and Materials Plan, Sheet C-6.

c) Locations and dimensions of any easements and public or private rights of way, or other burdens, existing and proposed:

The following easements exist within the limits of the proposed IKEA retail store parcel:

- 35-foot wide driveway and water line easement that benefits the IKEA retail store parcel;
- 33-foot wide "way" to access a portion of the IKEA retail store parcel from Assembly Square Drive;

- indeterminate width access easement across former Boston and Maine Railroad land over a "traveled way" from North Union Street to benefit the IKEA retail store parcel;
- 20-foot wide MWRA sewer easement;
- 20-foot wide Boston Edison Co. underground electric transmission easement;
- two 10-foot wide City of Somerville sewer easements;
- variable width access easement from Assembly Square Drive to the MBTA right-of-way benefiting the MBTA; and
- a possible electric easement to service an electrical transformer located on 30-34 Sturtevant Street.

The following easements across a portion of the former Assembly Square Mall parcel exist in part within the proposed limits of the realigned and extended Assembly Square Drive:

- City of Somerville sewer easement (reported by Somerville DPW to be abandoned)
- 20-foot wide City of Somerville easement
- 10-foot wide Boston Edison Company easement
- variable width DCR right-of-way and access easement (access to Somerville Marginal Conduit); and
- Variable width MWRA sewer easement.

The existing easements and rights of way are shown on the Existing Conditions Plan of Land.

The Project includes the widening of a portion of Assembly Square Drive along the frontage of the IKEA store parcel, the realignment of a portion of Assembly Square Drive from New Road to Foley Street through land owned by an affiliate of the Proponent, and the extension of Assembly Square Drive from Foley Street through a portion of the Assembly Square Marketplace parking lot (owned by an affiliate of the Proponent) to a connection to the Fellsway at the current site access driveway for the Assembly Square Marketplace. Subdivision Plans of Land are being submitted simultaneously with this Final Level PUD Approval to support the creation of new parcels for the IKEA store site and the widening, realignment and extension of Assembly Square Drive.

A portion of the existing Assembly Square Drive from Foley Street south to the edge of the proposed realignment will be abandoned by the City of Somerville and the former right-of-way transferred to the proponent in exchange for the realigned right-of-way.

The creation of IKEA Way will be by Subdivision Plan of Land and dedication of public way from a portion of the IKEA store parcel as a part of a future phase of the overall Master Plan development. The portion of the Project site that will eventually be dedicated for the future IKEA Way right-of-way is shown on the Layout and Materials Plan as a Proposed Roadway Easement.

d) at-grade parking and loading areas showing number, location, and dimensions of the parking and loading spaces, driveways, access and sidewalks:

The proposed IKEA store site is designed to minimize surface parking. Of the 1,367

parking spaces provided on the IKEA store site, 1,194 of the spaces are located under the proposed store in two levels of structured parking. Standard parking spaces will be 9-feet by 18-feet, standard accessible parking spaces will be 14-feet by 18-feet, and van accessible spaces will be 18-feet by 18-feet. There are no compact spaces proposed. Drive aisles within the surface and structured parking areas will be 24-feet wide.

Access to the IKEA store parking is provided from both Assembly Square Drive and the site driveway (future IKEA Way) on the north side of the building. The driveway from Assembly Square Drive is a median-divided access; one entrance lane and two exit lanes are available to passenger vehicles. A separate truck only entrance is also provided from Assembly Square Drive. The surface parking lot is connected by drive aisles to the parking under the building. There are two access points into the structured parking from the future IKEA Way; both are located toward the rear of the site and are two lane, two-way driveway openings. The second level of parking is accessed from the ground level parking by two separate, two-way ramps.

IKEA has committed to dedicating 200 of the parking spaces at the easterly edge of the ground level, covered parking for exclusive weekday use by MBTA Orange Line riders, once the planned MBTA station is operational.

Receiving for the IKEA store is located on an elevated loading/service canopy over a portion of the structured parking on the east side of the building; eight loading spaces and six loading doors are located on the loading canopy. In addition to the receiving doors, IKEA's four recycling containers and compactor (accessed internally) are located on the canopy as well. The loading canopy is separate from all visitor parking areas and access to the loading canopy is by a "trucks only" signed ramp from the east side of the surface parking lot.

A separate Home Delivery loading area is located on the north side of the IKEA store building within a screened truck well. Access to this loading area is from a service court adjacent to the future IKEA Way.

A multi-purpose pull out on the northbound side of Assembly Square Drive near the intersection of the future IKEA Way will be used for an MBTA and shuttle bus stop. A bus shelter and landscaping within the sidewalk area are proposed to support the bus stop. Additionally, the pull out will be used, during restricted hours only, for loading associated with IKEA's restaurant and employee cafeteria. The area will also be used for trash pickup from dumpsters that are stored within locked rooms on the ground floor of the IKEA building. Loading use of the pull out will be restricted to late night and early morning hours only to minimize conflict use of the area.

Sidewalks and pedestrian crosswalks within the parking areas and around the IKEA site are shown on the Layout and Materials Plan. A pedestrian path is provided through the ground floor parking level, from a pedestrian entrance to the parking garage at the extension of the future Main Street, to the primary store entrance vestibule.

Sidewalks and crosswalks at driveways and intersecting streets are provided throughout the length of both sides of Assembly Square Drive, along the north side

of the IKEA store and along the south side of the IKEA Park located at the northeast corner of the intersection of Assembly Square Drive and the future IKEA Way.

A paved walkway and benches are provided in the open space area at the northeast corner of the IKEA store building. This area is also used as a bioretention garden. Rainwater from the truck canopy is collected in a shallow, vegetated swale between the walkway and the edge of the parking area and allowed to infiltrate to perforated underdrains before being collected in the site's underground detention storage. The larger portion of the bioretention garden is graded to a gently sloping and shallow depression to capture excess runoff from the treatment swale and discharge it to the underground detention storage through a small landscape area drain.

5.2.3.4 A brief written description of the proposed project, such as proposed construction or demolition, all uses, which the project is intended to serve, expected number of employees and/or occupants and methods and hours of operation, as applicable:

This Phase 1 AA project is the first phase of the overall redevelopment of Assembly Square. In order to gain control of the riverfront for public access and mixed use design purposes, this phase needs to proceed ahead of the others. The Project includes the relocated IKEA retail store and the reconstruction and extension of a new, Assembly Square Drive.

The IKEA store is 340,000 square feet in area, configured on four floors. The ground floor provides access from the street and parking, utility, mechanical and storage rooms. The second level provides access to the store from the second level of parking. The third and fourth levels of the store are the sales floors, stock room, mechanical and equipment rooms, employee areas and the IKEA restaurant and employee cafeteria.

Phase 1-AA will require the demolition of three existing buildings (all owned by an affiliate of the proponent); 34 Sturtevant Street, 100 Sturtevant Street, and 147 Foley Street together with the parking, loading and other site improvements associated with each building. A portion of the existing Assembly Square Drive is proposed to be abandoned and replaced with a realignment of the roadway to allow the extension of Assembly Square Drive from Foley Street to the Fellsway. The extension of Assembly Square Drive will be across a portion of the Assembly Square Marketplace parcel (easterly of the present parking lot). Sewer, water, drainage and other utility lines located with the existing Assembly Square Drive will be demolished or abandoned in place as appropriate in each case to make way for expanded, replacement utilities suitable to meet the needs of the full build-out of the Assembly Square Master Plan area.

A portion of the Somerville Redevelopment Authority's parcel known as "Yard 21" will be redeveloped in this Project and incorporated into the IKEA store parcel. The existing railroad tracks will be removed to make way for the new building and site improvements.

IKEA will employ approximately 510 people, thus creating significant new employment opportunities for the area, and will be open to the public during customary commercial retail hours; generally 10 AM to 10 PM Monday through Saturday and 10 AM to 7 PM on Sundays.

IKEA restricts arrival and departure of trucks to only non-retail store hours. IKEA stores are typically occupied by IKEA employees beyond customary retail hours, usually for as much as twenty hours per day. The Home Delivery truck is normally loaded overnight and one truck per day leaves the store once in the morning and returns later in the day for loading of the next day's deliveries.

5.2.3.5 The total floor area and ground coverage ratio of each proposed building and structure:

Dimensional requirements and site conditions are summarized in the Zoning Summary Chart on the Layout and Materials Plan. The total floor area of the IKEA store, including all uses and levels, is 340,000 square feet. The lot area is 11.93 acres, resulting in a Floor to Area Ratio (FAR) of 0.65, well below the maximum allowed FAR of 10.0.

Open Space and Useable Open Space requirements within the Assembly Square Mixed Use District are 25% and 12.5% respectively. The Preliminary Master Plan approved by the Planning Board on December 14, 2006, provides that the Open Space and Useable Open Space requirements may be met in the aggregate over the entire PUD area without each individual parcel being required to meet the otherwise applicable standards. In order to arrange the Open Space and Useable Open Space in the most appropriate way, some parcels within the PUD area may exceed the open space requirements, while others may, within their individual property lines, contain less than the otherwise prescribed open space area. The Master Plan strives to locate the open space in proximity to the water and in aggregated areas that provide connection from the development to the water. As such, the majority of the open space within the PUD is located closer to the water. Given that the IKEA retail store is located within the PUD area furthest from the water, it follows that the IKEA site will contain less than the average or required open space. The area of Open Space on the IKEA site is 100,602 square feet. The area of Useable Open Space on the IKEA site is 81,992 square feet. The total area of the IKEA parcel is 519,738 square feet. Therefore Open Space is 19.4% of the total IKEA parcel area and Useable Open Space is 15.8% of the total IKEA parcel area.

5.2.3.6 Front, side and rear elevations:

Elevations of the IKEA store building are shown on the IKEA Elevations plan. The IKEA store is a four level configuration as discussed earlier. The store is set atop two levels of parking, putting the first sales floor at a height of 26 feet. The nominal height of the building parapet is 61 feet, with a portion extending to 66 feet - 6 inches high. The IKEA store is predominantly finished in blue metal panels. The front of the store is accented at the entry and vertical transportation area by yellow metal panels and glazing for views from the street into the entry and exit vestibules. The second level of parking is faced with 42-inch high concrete spandrel walls for safety and to maximize air circulation and natural light into the interior parking spaces. The loading doors are located on an elevated loading dock on the east elevation and will be screened by a vertical extension of architectural screening above the height of the dock level. Covered exterior emergency exits from the third and fourth levels, including walkways, stairs and railings are constructed of galvanized steel.

City staff, IKEA, the Proponent, and the Design Review Committee have met and discussed, on several occasions, the design of the IKEA store elevations. Important and significant improvements to the building have resulted from these discussions, including the following examples:

- architectural and vegetative (ivy) screening of the structured parking levels;
- pedestrian walkway under the building and accentuated pedestrian entrance aligned with the future Main Street, an important pedestrian corridor through the mixed use development from the edge of the Mystic River reservation past the new Assembly Square to the south terminus of Main Street at IKEA Way;
- additional storefront glazing along Assembly Square Drive and the future IKEA Way;
- addition of metal canopies and accent paving at the pedestrian access points to the store from Assembly Square Drive; and
- relocation of the country flags from the sidewalk to a location above the street supported from the front of the building.

5.2.3.7 Existing and proposed contour elevations in two foot increments:

The existing ground elevations are shown in one-foot contour intervals on the Existing Conditions Plan of Land. The Project site is generally flat with elevations ranging from 9 feet to 12 feet and is at the same relative elevation as the surrounding area.

The proposed Project site grading is shown on the Grading, Drainage and Erosion Control plan by one-foot elevation interval contours and spot grades. The proposed site elevations range from elevation 9 feet to 13 feet with the average elevation of the site being between elevations 11 feet and 12 feet.

The proposed vertical grades of Assembly Square Drive are shown on the Profile sheets in the Phase 1-AA Roadway Improvement Project, Assembly Square Drive plans accompanying this application. The proposed elevation of Assembly Square Drive is set to provide convenient access to the existing properties and uses along the alignment and to the proposed uses within the PUD Master Plan area.

5.2.3.8 Provisions for vehicular and pedestrian circulation:

Pedestrian sidewalks of varying widths of between 5 and 15 feet will run along both sides of Assembly Square Drive. A sidewalk of 6 feet in width runs from Assembly Square Drive to the rear of the IKEA site for access to the future MBTA station. The sidewalk is integrated as part of the system of sidewalks throughout the Assembly Square redevelopment area. Streetscape landscaping is provided along the length of Assembly Square, generally in the form of a landscape strip adjacent to the curb, although short sections of sidewalk along Assembly Square Drive are adjacent to the street with landscaping provided behind the sidewalk.

Pedestrian connections from the Assembly Square area are provided by sidewalks along both sides of the entire length of Assembly Square Drive and through several off-site transportation improvements at the following locations, specifically in the form of new or upgraded traffic signals with vehicle and bicycle detection, pedestrian actuated signals, crosswalks, and accessible ramps:

- Lombardi Street from Broadway to Mystic Avenue, including replacing the sidewalk along Lombardi Street from Broadway to Mystic Avenue;
- Mystic Avenue at Assembly Square Drive;
- New Road at Mystic Avenue;
- Foley Street at Middlesex Avenue;
- Mystic Avenue NB at Fellsway (Rte. 28 Southbound);
- Assembly Square Drive at the Fellsway (Rte. 28); and
- Middlesex Avenue at the Fellsway (Rte. 28).

The Proponent has agreed to construct the intersection and pedestrian connection improvements on the Fellsway (Rte. 28) at the intersections of Assembly Square Drive and Middlesex Avenue as a part of the Phase 1-AA project to hasten improved pedestrian safety and connection from the area of Ten Hills to the Assembly Square area, even though these intersection improvements are identified as traffic mitigation improvements required only in later phases of the full-build development.

Additionally, the Proponent has agreed to fund the construction of the Wellington Bridge Bike and Pedestrian Undercarriage project. The undercarriage will connect DCR trails along the Mystic River Reservation from the west side of the Fellsway (Rte. 28) to the east side, not only improving bicycle and pedestrian access to the Assembly Square area and Draw 7 Park, but also providing an alternate route to access the east side of the Fellsway and Wellington Bridge for access to Wellington Station.

5.2.3.9 Color, materials, and exterior features of proposed structures:

The IKEA store is predominantly finished in blue metal panels. The front of the store is accented at the entry and vertical transportation area by yellow metal panels and glazing for views from the street into the entry and exit vestibules. The second level of parking is faced with 42-inch high concrete spandrel walls for safety and to maximize air circulation and natural light into the interior parking spaces. The loading doors are located on an elevated loading dock on the east elevation and will be screened by a vertical extension of architectural screening above the height of the dock level. Covered exterior emergency exits from the third and fourth levels, including walkways, stairs and railings are constructed of galvanized steel.

5.2.3.10 Landscaping and screening, including trees, stones, walls, fences and other features to be retained and removed as well as color, size and type of landscape surface materials:

The Project site is presently occupied by several commercial buildings and rail sidings (Yard 21) which will be demolished or removed. The site has essentially no landscaping beyond fewer than a dozen small caliper trees in restrictive planters along the edge of parking lot for 34 Sturtevant Street and a small copse of poorly maintained trees at the extreme south end of the Project site between Assembly Square Drive and the MBTA right-of-way.

In their place the Project will include significant new landscaping provided throughout the Project site including street trees and sidewalk landscaping along the length of the new Assembly Square Drive, building landscaping specifically designed to create a pleasant pedestrian experience by reducing the perceptions of building mass from a

street-level perspective, building landscaping for softening and screening purposes, green roof landscaping for energy efficiency and stormwater reduction purposes and the creation of publicly accessible and useable open space areas designed specifically for passive recreation purposes. All of these proposed landscaping plans may be found on the Landscaping Plan. The planting palette for the street trees is taken from "The Assembly Square Unifying Design Guidelines for the Public Realm" and includes.

Bio-retention Garden: Approximately one half acre of landscaped open space is located at the northeast corner of the IKEA store site. This area is designed as a passive recreation area in combination with a Low Impact Design (LID) component of the overall stormwater management system for the Project site, a bioretention garden. The area is planted with trees and shrubs to unify it with landscaping treatments throughout the Project area and supplemented with ornamental grasses and sedges for variety and for their usefulness in complimenting the stormwater management component to the area's function. In addition to the plantings, the area is traversed by a pervious paver walkway through the vegetation and connecting to IKEA's structured parking (at the area designated to be used by MBTA riders during weekdays, once the MBTA station is operational) and benches.

The bioretention aspects of the bioretention garden (or rain garden) include a narrow, gently sloping, shallow swale adjacent to the IKEA building that receives rainwater from the elevated loading area. The swale is designed to accept an inch of rainfall from the loading area and allow it to infiltrate through the surface soils to an underlying subsurface drainage system that connects to the underground detention storage pipes. The vegetation in the bioretention garden serves to filter and transpire the runoff, improving water quality and reducing runoff quantity. The soil medium filters out pollutants. The inspection and maintenance of the area is assured through the Long Term Operations and Maintenance plan for the Project site. Runoff from rainfall events of greater than an inch will overtop the small swale to a secondary shallow basin that is drained by a small drain inlet that is connected to the underground detention storage system. More information is provided in the Stormwater Management Report accompanying this application.

IKEA Park: IKEA Park is an area of open space located the northwest corner of the Project site in the northeast quadrant of the intersection of Assembly Square Drive and the future IKEA Way. This park area features one of two IKEA "Circle of Flags". The Circle of Flags (detailed in the IKEA Signage Special Permit application materials) is a circular arrangement of eight 40-foot tall flag poles each flying an IKEA flag banner. Flanking the Circle of Flags is a trellis and benches. The corner of IKEA park is a pedestrian area paved with unit pavers and extensive perennials and ground cover landscaping at the base of the circle.

The Assembly Square Drive street tree planting design is carried around the perimeter of the park and a strong pedestrian connection is made to the path to the IKEA store. The balance of the park area is presently proposed to be loamed and seeded with grass for a relatively unstructured, passive use area. Further refinement of the park will be coordinated with future phases of the PUD Master Plan development to ensure the park remains appropriate to its future environs.

Mystic Avenue Gateway to Assembly Square: The Proponent is also proposing to landscape the City of Somerville parcels located between Assembly Square Drive and

the MBTA right-of-way, immediately adjacent to Mystic Avenue and extending northerly along Assembly Square Drive for approximately 420 feet.

5.2.3.11 Measures taken to preserve and protect natural resources:

There are no unspoiled natural resources located within the Project limits. Remediation of several current Brownfield areas by virtue of this Project is a clear environmental benefit of the Project. In addition, the Proponent and IKEA have publicly committed to a building design that achieves Leadership in Energy and Environmental Design (LEED) Plus status as prescribed by the U.S. Green Building Council.

Lastly, it should be noted that one of the very core reasons for this Project currently before the Planning Board is to relocate the previously approved IKEA store away from the edge of the Mystic River. Through this relocation, the public parkland that does exist along the river can be expanded and improved upon and recreational public access of the waters edge can be accommodated in a way that could never happen without this Project moving forward.

5.2.3.12 Outdoor lighting, including location and intensity of lighting facilities:

The Project includes site lighting for the building and associated parking lot plus Somerville decorative street lighting along Assembly Square Drive. The site lighting illumination and fixture details are provided on the Site Lighting Plan. The parking lot average illumination level of just under 5 foot-candles is achieved by the use twelve 38-foot high pole mounted shoe-box style fixtures; the luminaires cast the light only downward. Each pole is fitted with a single 1000W metal halide lamp.

The entire length of Assembly Square Drive will be lighted with 27'-3" high Somerville decorative light fixtures and poles similar to the roadway lighting used on Fresh Pond Parkway as described in the *Unifying Guidelines for the Public Realm*. Where poles are set in the sidewalk area a pole and arm with pendant style fixture. Where poles are set in the dividing median in Assembly Square Drive, the Somerville decorative standard "acorn" style pole and fixture will be used.

5.2.3.13 Dimensions and locations of signs, proposed and existing:

Existing signage within the area of Phase I-AA is comprised of retail signs servicing the existing buildings on the Project site. All existing signage will be demolished simultaneously with the demolition of the buildings,

The proposed signage for Phase I-AA is contained within a separate signage application being submitted simultaneously by the Proponent. In addition, the location of signage on the building itself can be seen on the Site Elevations Plan and for the IKEA retail site in general on the Layout and Materials Plan.

5.2.3.14 Location and significance of historic structures:

Based on a Historical Survey conducted by Vanasse Hangen Brustlin in 2005, no properties included in the State or National Registers of Historic Places are located in the Project limits. As a Project enhancement, the formerly dilapidated Assembly Square Water Tower that was located on Assembly Square Mall site, is being restored and will be reinstalled as a historic structure defining the Assembly Square area. It is hoped that this newly refurbished Water Tower will become an icon of civic pride and a topic of renewed historic interest in the history of Somerville and Assembly Square.

One building located within the Project site is listed on the Massachusetts Historical Commission's *Inventory of Historic and Archaeological Assets of the Commonwealth*, being the 1941 Sears Roebuck and Company Warehouse at 34 Sturtevant Street. As discussed above, the Proponent intends to demolish the building located at 34 Sturtevant Street; the Massachusetts Historical Commission raised no objection to this proposal in response to the Environmental Notification Form circulated to it. The demolition is consistent with the City of Somerville's Assembly Square Revitalization Plan

5.2.3.15 Method of handling solid waste disposal, and screening of disposal facilities:

Solid waste disposal will be handled by licensed private contractors, presenting no additional burden to the City. The disposal facilities (dumpsters and compactors) will be entirely internal or screened from public view. The IKEA store will use an internally loaded compactor located on the elevated loading dock. Additionally, recyclable materials are loaded into recycling units for periodic removal from the site to appropriate recycling centers. Solid waste from the restaurant and cafeteria uses within the building is carried to dumpsters located in locked storage rooms near the northwest corner of the store. The dumpsters are emptied by private solid waste removal contractors during early morning hours.

5.2.3.16 Description and location of all proposed mechanical and electrical system components including exhaust and ventilation system, transformers and satellite dishes:

Electrical and mechanical equipment will be located on the roof, interior to the buildings, underground or within screened enclosures. See the Utility Plan for locations of mechanical and electrical equipment.

It should be noted that energy consumption and use are two of the major criteria in meeting LEED Plus standards. Those systems are under design to maximize energy conservation and greenhouse gas reduction.

5.2.3.17 Locations of and adequacy of existing and proposed on-site public utilities, facilities, and conditions (water, sewerage, and drainage), showing size and direction of flows:

The existing utilities are shown on the Existing Conditions Plan of Land. The proposed utilities and drainage systems for the IKEA store site are shown on the Grading, Drainage and Erosion Control Plan, on the Utility Plan. The proposed utilities located in Assembly Square Drive are shown on the Utility plans in the Phase 1-AA Roadway Improvement Project plans, Assembly Square Drive.

The scope of work for this application and the concurrent application for Assembly Square Drive includes the upgrades and construction of new utilities (water, sewerage, and drainage) sufficient to support the proposed IKEA building. In addition, utilities

that will be located in Assembly Square Drive have been sized to handle the full build out of the Master Plan. This was done to avoid opening Assembly Square Drive in the future for utility installation and demonstrates the Proponent's intent to develop the complete mixed-use development plan. The design information for utilities is contained in the "Utility Design & Management" section of the application booklet.

Subsequent to this phase, full build out of the PUD Master Plan will require construction of a new stormwater drainage system that will reduce flows into the Somerville and MWRA systems and discharge the newly separated stormwater at a location below the Amelia Earhart Dam. This action will, in and of itself, significantly reduce the number of occurrences each year when Combined Sewer Overflows (CSOs) discharge unhealthy water directly into the Mystic River.

The Proponent is also in the process of identifying – in concert with the City DPW – a series of I/I improvements to separate stormwater drainage from the sewer systems in the Ten Hills Neighborhood. This action will further reduce the number of annual CSO discharges to the river.

Because the stormwater and sewerage improvements required for full build out of the PUD Master Plan involve time consuming land disposition issues for the state, the Secretary of Environmental Affairs in his decision on the Project allowed an interim engineering plan for both stormwater and wastewater (approximately 36,500 gallons per day). Project engineers have worked with MWRA and DEP to design the interim improvements that are part of this Project.

MEPA determined that the Project "will not exacerbate wastewater discharges from the Somerville Marginal Conduit (SMC) to the Mystic River". (*Final Record of Decision by Secretary Bowles issued June 7, 2007*)

5.2.3.18 Demolition and construction procedures including impact mitigation measures; an estimate of the time period required for the completion of the development:

Phase 1-AA will require the demolition of five buildings in order for the construction of IKEA and the new Assembly Square Drive alignment. It is anticipated that construction will start in 2008 and be completed in 2009.

It is anticipated that demolition will begin in the summer of 2008 and IKEA will be able to begin construction of the store by the end of 2008. Assuming a year to construct the store, it is anticipated that the IKEA store could be open by the end of 2009.

Demolition will entail the removal and proper disposal of certain hazardous materials from the existing buildings. The existing pavements and gravel track beds will be evaluated for possible, appropriate re-use within the limits of Phase 1-AA as structural back fill for demolition excavations and base for site parking and roadway construction. Known hazardous materials spills on the Project site will be appropriately remediated after demolition and before IKEA begins construction of its store. All site remediation will be conducted in accordance with the Massachusetts Contingency Plan (MCP) and other governing regulations, which includes management of the remediation by a Licensed Site Professional (LSP) to insure compliance with the MCP.

Only portions of 123 Foley Street (Spaulding Brick) and 34 Sturtevant Street (Good Times) are included in the IKEA store site. While the entire 34 Sturtevant Street site will be razed, a portion will be redeveloped as part of the IKEA store site, and the remainder will be used as a staging area for the construction of the IKEA store. Once the IKEA store is completed the staging area will be stabilized with loam and seed. The portion of 123 Foley Street that is not incorporated into the IKEA store site will be stabilized with loam and seed to await development as part of a future phase. It is not currently anticipated that the building, presently occupied by Spaulding Brick, will be razed during Phase 1-AA. The building and site will be properly secured and monitored to preclude vagrancy.

Only a portion of the Yard 21 site will be cleared and incorporated into the IKEA store site. The remainder of Yard 21 (that portion not incorporated into the IKEA store site) will remain in its current state. All of 100 Sturtevant Street will be cleared, the buildings razed and the site incorporated into the IKEA store site.

A portion of existing Assembly Square Drive between New Road and Foley Street will be abandoned as the realignment of Assembly Square Drive allows for the extension of the roadway through the easterly edge of the Assembly Square Marketplace parcel to a connection to the Fellsway. The roadway, sidewalks and utilities in the abandoned roadway will be demolished or abandoned in place as appropriate and the surface will be stabilized with loam and seed to await re-development during a future phase of the Master Plan build out.

5.2.3.19 A traffic study including estimated peak hour traffic volumes generated by the proposed use in relation to existing volumes and projected future conditions or, if the project is 25,000 square feet or more, a traffic impact analysis which is prepared by a professional traffic engineer:

A comprehensive traffic impact analysis was included in the Planned Unit Development Preliminary Master Plan application. While this phase of the project is considered a new development by the Proponent for PUD permitting purposes, the proposed IKEA was previously approved by both the City and the state as part of a larger building program. The previous approval included not only the IKEA, but two additional office buildings totaling 208,000 sf along with 49,000 sf of accompanying retail/restaurant space. The previous submission for the former IKEA site included a Traffic Impact Analysis and associated mitigation approved and required by the City and the state.

As a part of this current application, although the trip generation numbers are lower because the size and scope of the Project is smaller, the Proponent has committed to honor and fulfill all of the previously required traffic mitigation measures to help ensure there are no significant reductions in level of service at the study area intersections around the site.

Furthermore, the Proponent has agreed as a condition of both the PUD approval and the state Final Record of Decision (FROD) approval to increase the scope and expand the Traffic Impact Analysis as part of future filings. In recent months VHB has attended a series of meetings with the City of Somerville staff and its traffic consultant to review the peer review comments on the initial Traffic Impact and Access Study submitted as part of the PUD. As part of this process, the differences in analysis methodologies suggested by the city's consultant as compared to that used by VHB are being discussed

so as to reach a consensus on the appropriate assumptions to be used in the expanded traffic study for the overall Assembly Square development to be submitted prior to Phase 1-A.

VHB has provided a Traffic Impact and Access Study as part of this Phase 1-AA submission. The study area includes the same locations analyzed in the PUD Traffic Impact and Access Study but this study focuses primarily on the Phase 1-AA component of the overall development. The study documents existing conditions and planned future conditions both with and without the project. To mitigate the project's traffic-related impacts, the following mitigation measures have been committed to be implemented by the Proponent:

- Mystic Avenue northbound at Lombardi Street/Assembly Square Drive – installation of new mast arm signal supports, signal heads, loop detectors, and pedestrian amenities.
- Broadway at Lombardi – installation of vehicle loop detectors, new signal heads, upgraded pedestrian signal infrastructure, new emergency vehicle preemption, restriped pavement markings and interconnection to Mystic Avenue northbound at Lombardi Street/Assembly Square Drive.
- Mystic Avenue northbound and Mystic Avenue southbound U-turn underpass – installation of traffic signal to operate under the same signal controller as the Mystic Avenue northbound at Lombardi Street/Assembly Square Drive intersection.
- Mystic Avenue northbound at New Road – replacement of existing traffic signal controller, installation of new mast arm signal support facing Mystic Avenue northbound, new signal post for the New Road approach, loop detectors, and pedestrian amenities. Conduit will be provided extending down New Road to interconnect this location to the previously mentioned signals as part of a closed-loop system.
- Middlesex Avenue at Foley Street - replacement of inoperative existing traffic signal controller, installation of new mast arm signal support facing Middlesex Avenue traffic in both direction, new signal posts for the Foley Street approach, loop detectors, and pedestrian amenities. Conduit will be provided extending down Foley Street to interconnect this location to the previously mentioned signals as part of a closed-loop system.
- Assembly Square Drive at New Road/IKEA Way – installation of a new traffic signal to be interconnected with the locations listed above as part of a closed-loop system. These improvements are shown in the accompanying Phase 1-AA Roadway Improvement Project plans for Assembly Square Drive.
- Route 28 South at Mystic Avenue – safety improvements including installation of mast arm signal support and new LED signal faces for the Route 28 southbound approach and Mystic Avenue northbound approach.
- Route 28 at Assembly Square Drive – while the analysis presented in the Traffic Impact and Access Study indicates improvements to this location are not necessary until later phases of the project; mitigation will be implemented by the Proponent as part of Phase 1-AA. Specifically, this intersection will be reconfigured so as to allow exiting left turns from Assembly Square Drive onto Route 28. This mitigation will require the installation of new signal equipment,

as well as physical modifications to the adjacent Route 28/Middlesex Avenue intersection. The Middlesex Avenue improvements are primarily due to the need to maintain the existing Route 28 left-turn storage bay lengths, and not any changes to the general traffic operation at this location. However, as new pedestrian crosswalks and phasing are planned to be put in place at Route 28/Assembly Square Drive, the pedestrian amenities at Route 28/Middlesex Avenue will also be revisited to help ensure that appropriate pedestrian accommodations are provided at both locations.

- Assembly Square Drive reconstruction – this phase of the project includes reconstruction and improvement of Assembly Square Drive to provide access through the entire Project Site and provide a seamless connection to Route 28 to the north and to Mystic Avenue to the south. As shown on the accompanying Phase 1-AA Roadway Improvement Project plans for Assembly Square Drive, this roadway will feature landscape amenities, bicycle accommodations, and sidewalks while accommodating vehicular traffic within the four-lane cross-section planned (with turn lanes being provided as needed at the various intersections).

5.2.3.20 General summary of existing and proposed easements or other burdens now existing or to be placed on the property:

The following easements exist within the limits of the proposed IKEA retail store parcel:

- 35-foot wide driveway and water line easement that benefits the IKEA retail store parcel;
- 33-foot wide “way” to access a portion of the IKEA retail store parcel from Assembly Square Drive;
- indeterminate width access easement across former Boston and Maine Railroad land over a “traveled way” from North Union Street to benefit the IKEA retail store parcel;
- 20-foot wide MWRA sewer easement;
- 20-foot wide Boston Edison Co. underground electric transmission easement;
- two 10-foot wide City of Somerville sewer easements;
- variable width access easement from Assembly Square Drive to the MBTA right-of-way benefiting the MBTA; and
- a possible electric easement to service an electrical transformer located on 30-34 Sturtevant Street.

The following easements across a portion of the former Assembly Square Mall parcel exist in part within the proposed limits of the realigned and extended Assembly Square Drive:

- Sewer easement (reported by Somerville DPW to be abandoned)
- 20-foot wide City of Somerville easement
- 10-foot wide Boston Edison Company easement
- Variable width DCR right-of-way and access easement (access to Somerville Marginal Conduit); and
- Variable width MWRA sewer easement.

The existing easements and rights of way are shown on the Existing Conditions Plan of Land.

The Project includes the widening of a portion of Assembly Square Drive along the frontage of the IKEA store parcel, the realignment of a portion of Assembly Square Drive from New Road to Foley Street through land owned by the proponent, and the extension of Assembly Square Drive from Foley Street through a portion of the former Assembly Square Mall parking lot to a connection to the Fellsway at the current site access driveway for the Assembly Square Marketplace. Subdivision Plans of Land are being submitted simultaneously with this Final Level PUD Approval to support the creation of new parcels for the IKEA store site and the widening, realignment and extension of Assembly Square Drive.

A portion of the existing Assembly Square Drive from Foley Street south to the edge of the proposed realignment will be abandoned and the former right-of-way transferred to the proponent in exchange for the realigned right-of-way.

The creation of IKEA Way will be by similar Subdivision Plan of Land and dedication of public way from a portion of the IKEA store parcel as a part of a future phase of the overall Master Plan development. The portion of the Project site that will eventually be dedicated for the future IKEA Way right-of-way is shown on the Layout and Materials Plan as an Access and Utility Easement.

5.2.3.21 Wetlands, ponds, and surface water bodies, as defined under the Wetlands Protection Act, M.G.L. chapter 131, Section 40, and rules promulgated there under, 310 C.M.R. 10.00:

Existing resource areas are shown on the Existing Conditions Plan of Land. There are no wetlands or lands subject to flooding on Project site that will be altered by the Project. A section of the extension of Assembly Square Drive through the Assembly Square Marketplace property will be within the buffer zone to wetland resources areas related to the Mystic River.

5.2.3.22 Photographs of at least eight (8) by ten (10) inches, showing the development site and surrounding parcels:

Site photographs are included in the application booklet showing the site from the northerly, easterly, southerly and westerly directions and the surrounding uses...

5.2.3.23 Names and addresses of all property owners within three hundred (300) feet of the site boundaries:

A copy of the Certified Abutter's lists from Somerville and Boston are included in the application.

ARTICLE 6: ESTABLISHMENT OF ZONING DISTRICTS

6.4.7. A.1 Transportation Analysis. All new developments shall conform to the requirements set forth in any Transportation Study, subject to the approval of the SPGA.

As noted in section 5.2.3.19, a Traffic Impact and Access Study had been included as part of this Phase 1-AA submission. The study area includes the same locations analyzed in the PUD Traffic Impact and Access Study but focuses solely on the Phase 1-AA component of the overall development with appropriate mitigation being provided to help offset the project's potential traffic-related impacts. Besides the measures being implemented exclusively to mitigate the project's potential impacts, additional infrastructure improvements will be implemented even though these intersection improvements are identified as traffic mitigation improvements required only in later phases of the full-build development.

6.4.7. A.2 Parking Requirements. Developments shall meet the parking requirements set forth in Section 9.15.

Section 9.15, Bicycle Access and Parking, requires that 27 bicycle parking spaces be provided on the site. Twenty-seven bicycle parking spaces are provided under the IKEA store building adjacent to the surface parking spaces. The location of the bicycle parking spaces is shown on the Layout and Materials Plan.

Section 9.16 of the Somerville Zoning Ordinance requires that at least 340 parking spaces be provided for the IKEA retail store. A total of 1,367 parking spaces are provided on the IKEA store site. Of that total, 1,194 parking spaces are located under the proposed building on ground level and one level above ground level. The remaining 173 parking spaces are located within a surface parking lot adjacent to the south elevation of the IKEA store building.

Section 9.16 requires that all new parking serving an entirely new building be located in structures that are entirely below grade or extend at least one level above grade except if waived by the SPGA due to market or environmental conditions. Additionally, at grade parking shall be permitted where up to 10% of the overall parking provided in a Development may be located in surface lots in order to provide short-term or temporary parking spaces.

The Planned Unit Development Preliminary Master Plan for Assembly Square, approved on December 14, 2006, established an overall total of 10,146 parking spaces (not including on-street parking). Of this overall total, 1,104 were designated for the Assembly Square Marketplace, which was subject to a separate SPSR-A approval (in which 1,095 surface parking spaces were approved).

Of the remaining overall total parking spaces established in the PUD Preliminary Master Plan, 9,042 spaces, 174 spaces were, and still are on the Phase 1-AA plan, located in a surface parking lot. This represents less than 2% of the overall total parking. Section 9.16 also allows that up to 10% of the overall parking provided in a development may be located in surface lots in order to provide short-term or temporary parking spaces (such

as for retail use), therefore the overall development and Phase 1-AA meet the structured parking requirement of the Somerville Zoning Ordinance.

To the extent the Planning Board finds that Section 9.16 is not satisfied, the Proponent hereby seeks a waiver of Section 9.16 on the basis of both market and environmental conditions.

6.4.7. A.3 Landscaping Requirements. Developments shall conform to the applicable landscaping requirements set forth in Article 10. Open spaces shall be contiguous to the extent practical, in the opinion of the SPGA.

A landscaping plan has been designed for both the IKEA site and Assembly Square Drive. See the Landscape Plan for details of the proposed landscaping for the IKEA site and the Landscaping Plans in the Phase 1-AA Roadway Improvement Project, Assembly Square Drive for roadway landscaping plans and details.

6.4.7. A.4 Pedestrian Connections. Continuous pedestrian connections shall be supported between all major points of pedestrian activity on the Development Site, including, but not limited to, connections to the Mystic River waterfront, connections to all public and private ways abutting the Development Site, and any transit stops. Developments shall support improved access between the ASMD and the Ten Hills and East Broadway neighborhoods by means of sidewalk connections, crosswalks, landscaping, traffic signalization and traffic calming methods as appropriate...

The proposed design includes pedestrian access along the entirety of the new alignment of Assembly Square Drive. The design of Assembly Square Drive includes sidewalk on the east and west sides for the entire length from the Fellsway to Mystic Avenue. This will allow pedestrian access to the existing Assembly Square Marketplace and the Mystic River Waterfront bike path. In addition, pedestrian access improvements which include bicycle detection and pedestrian actuation, upgraded or new traffic signal equipment, sidewalks, accessible ramps and crosswalks will be made at the following intersections:

- Lombardi Street from Broadway to Mystic Avenue, including replacing the sidewalk along Lombardi Street from Broadway to Mystic Avenue;
- Mystic Avenue at Assembly Square Drive/Lombardi Street;;
- New Road at Mystic Avenue northbound;
- Foley Street at Middlesex Avenue;
- Mystic Avenue NB at Fellsway(Rte. 28 southbound);
- Assembly Square Drive at the Fellsway (Rte. 28)
- Middlesex Avenue at the Fellsway (Rte. 28)

The Proponent has agreed to construct the intersection and pedestrian connection improvements on the Fellsway (Rte. 28) at the intersections of Assembly Square Drive and Middlesex Avenue as a part of the Phase 1-AA project to hasten improved pedestrian safety and connection from the area of Ten Hills to the Assembly Square area, even though these intersection improvements are identified as traffic mitigation improvements required only in later phases of the full-build development.

Additionally, the Proponent has agreed to fund the construction of the Wellington Bridge Bike and Pedestrian Undercarriage project. The undercarriage will connect DCR trails along the Mystic River Reservation from the west side of the Fellsway (Rte. 28) to the east side, not only improving bicycle and pedestrian access to the Assembly Square area and Draw 7 Park, but also providing an alternate route to access the east side of the Fellsway and Wellington Bridge for access to Wellington Station.

6.4.7. B Design Guidelines. In reviewing a Development of more than 10,000 square feet, the SPGA/DRC shall consider the following design guidelines. These guidelines are intended to serve as a general basis for the SPGA and Applicant alike to discuss the design merits of a Development, but are not intended to inhibit design creativity when the application otherwise conforms to all other substantive review criteria. These guidelines are not intended to discourage innovative architectural design solutions. Rather, they provide general standards for the massing, sitting and articulation of Buildings for developers and architects to work from. They also provide parameters for dialogue between the Applicant and SPGA on design issues for Developments. These Guidelines are intended to supersede the guidelines set forth in Section 5.2.4. It is understood that existing Buildings and Structures will not be able to comply with all of the following Guidelines:

The Proponent has met with the DRC on March 13 and May 31, 2007 to discuss the design of Phase 1-AA. The Proponent has made further modifications to Phase 1-AA to incorporate the recommendations of the DRC including:

- architectural and vegetative (ivy) screening of the structured parking levels;
- pedestrian walkway under the building and accentuated pedestrian entrance aligned with the future Main Street, an important pedestrian corridor through the mixed use development from the edge of the Mystic River reservation past the new Assembly Square to the south terminus of Main Street at IKEA Way;
- additional storefront glazing along Assembly Square Drive and the future IKEA Way;
- addition of metal canopies and accent paving at the pedestrian access points to the store from Assembly Square Drive; and
- relocation of the country flags from the sidewalk to a location above the street supported from the front of the building.

6.4.7. B.1 Street and Sidewalk Design. Street and sidewalk design shall be based on the Assembly Square Public Realm Design Guidelines and applicable engineering standards, provided that any street shown in such Guidelines as running through an existing Building is not required to be constructed until such Building is demolished.

Refer to the Phase 1-AA Roadway Improvement Plans for detailed roadway plans for the new Assembly Square Drive. The primary function of Assembly Square Drive is to provide the backbone of vehicular, bicycle and pedestrian connection throughout the length of the Assembly Square area. Within the roadway, for the entire length, bicycles are accommodated on the roadway either by wide (15-feet) outside lanes or by striped shoulders (6-feet). The new traffic signal at Assembly Square Drive and New Road/IKEA Way, as well as all new or upgraded signals provided by the Proponent, is equipped with bicycle detection.

From the Fellsway south to New Road, in addition to the bicycle accommodation, there are two travel lanes in each direction. From New Road south to Mystic Avenue there is one travel lane and a wide striped shoulder in each direction on either side of a dividing median.

Between the Assembly Square Marketplace driveway and "B" Street a 9-foot wide landscaped center median separates the travel lanes. Between "B" Street and Foley Street there is a center left turn lane providing safe and efficient turning movements at the major intersecting future roadways that will provide connection and access to the main blocks of the retail and residential/office mixed use area. Again, from Foley Street to the southern end of the IKEA store surface parking lot there is a 10-foot wide planted center median separating the two directions of travel. As Assembly Square Drive continues south to the intersection with Mystic Avenue, the median width is gradually reduced and plantings are provided in the area behind the sidewalk between the road and the MBTA right-of-way.

New sidewalks will be constructed along both sides of the entire length of Assembly Square Drive. Typically the sidewalks are separated from the street by a 5-foot wide grass strip that will be planted with a variety of street trees consisting of groups of Armstrong Maples, Ginkgos, Tupelo, Red Maples and Lacebark Elms. At each future intersecting street, crosswalks and accessible ramps will be provided.

The function and corresponding design and streetscape treatment of Assembly Square Drive is consistent with the street hierarchy described in the Assembly Square Public Realm Design Guidelines.

6.4.7. B.2 Building Design. Buildings shall be designed to the highest architectural standards and shall be sited appropriately on the Lot. Specifically, all construction shall:

6.4.7. B.2.a Be located to create a presence on existing street edges or along major internal circulation routes. Maximum building setbacks of five feet shall be encouraged, except in special circumstances, where greater setbacks would enhance the pedestrian-friendly experience of the ASMD, such as dedicated open space. Buildings shall be located to reinforce both existing and future circulation patterns that may serve more than one Site:

The proposed IKEA building is situated on its lot as close as 14 feet from the edge of the traveled portion of Assembly Square Drive roadway in order to create a street presence yet still maintain a 5-foot tree grate and 9-foot walking area between the face of the building and the edge of the traveled way. At the pedestrian entry to the rear of the store from IKEA Way (at the extension of the future Main Street), the IKEA building is as close as 15 feet from the edge of the roadway.

6.4.7. B.2.b Create interesting entrance areas that are visible and directly accessible from major public access points, streets and circulation patterns. Extensive areas of glass and window, providing visual access to interior uses, shall be part of all street facades and will accompany building entrances. Multiple and frequent entrances oriented to streets are encouraged. Building entrances shall be clearly defined, through the use of

elements such as canopies, porticos, overhangs, peaked roof forms, arches. Entries set back from the street shall have outdoor patios, tile work, moldings, integral planters or wing walls with landscaped areas, or places for sitting:

The main access to IKEA is directly visible from Assembly Square Drive and contains a glass store front on the westerly side of the building so the public can see the various access options to the store. The paths from the Assembly Square Drive sidewalk to the doors to the entry vestibules are highlighted on the ground plane by accent pavers and on the building by entrance signage and metal canopies over the openings in the building face that lead to the vestibule doors.

Access to the IKEA store will also be clearly apparent from the MBTA station as the pedestrian entrance feature at the extension of the future Main Street is set apart from the rest of the north building elevation and repeats the IKEA yellow color scheme used at the pedestrian entry points to the store.

6.4.7. B.2.c Clearly define the pattern of bays, rhythms, and dimensions to create continuous visual interest and variety in the design of all faces:

The design of all faces of the IKEA retail store provides continuous visual interest through the use of bright colors, glass store fronts, metal canopies accentuating entryways under the building, signage and articulation of the wall plane along the west elevation, columns of the structured parking carrying architectural screens with ivy to the upper levels, street and foundation planting along the west, north and east elevations and the introduction of a pedestrian entrance way and street level display windows at the east end of the north elevation.

6.4.7. B.2.d Break down the overall scale of development to respond to the pedestrian-scale use of Open Space:

The overall scale of the development is broken down to the pedestrian scale through use of such architectural building features as metal canopies over entryways to the building, development of a passive recreation area at the northeast corner of the IKEA store that incorporates walkways, benches, ground level and tree canopy plantings between the IKEA store and the MBTA right-of-way, and a bench-lined trellis that frames the IKEA Circle of Flags in IKEA Park. Where possible along the length of Assembly Square Drive landscaped medians are introduced to breakdown the apparent width of the roadway and between Assembly Square Drive and the Assembly Square Marketplace parking lot a wide landscape and walkway corridor is planted with street trees to create a less congested pathway along the main circulation corridor through the Master Plan area.

The proponent is also proposing to make sidewalk and landscaping improvements (plantings and selective clearings and pruning) to City-owned open space at the intersection of Assembly Square Drive and Mystic Avenue.

6.4.7. B.2.e Use materials and colors consistent with traditional Buildings in the area with historic merit:

Two buildings in the Assembly Square area have been inventoried by the Massachusetts Historical Commission and despite that fact that one of the buildings is being demolished to make way for the IKEA store and the demolition of the other is called for by the City's revitalization plan, neither has architectural integrity remaining to be the basis for retention. The Assembly Square Marketplace, though not inventoried, will be one of the oldest structures in the area. Elements of its historic nature are preserved in the sky lights that remain in the roof system. The metal framing of the skylights and expanse of glass is reflected in the galvanized steel walkways and stairways from IKEA's emergency exits and the use of glazing on the IKEA store front.

IKEA's "trade dress" of blue and yellow is integral to their identity and is repeated and solidified in each and every one of their stores around the world.

6.4.7. B.2.f Locate building equipment and service areas away from Public Ways or major interior circulation routes and provide screening. Enclose all storage of inventory unless it is completely screened from public view with architectural elements meeting these guidelines:

Building equipment is located either inside the building, on the roof, on the loading dock, or is screened. Screening is provided for the truck docks, compactor and recycling by extending architectural screens supporting ivy above the height of the elevated dock. The transformer and emergency generator are located near the southeast corner of the building adjacent to the truck ramp and within the surface parking lot in a landscape island closest to the building. Inventory and storage are located inside the building.

6.4.7. B.2.g Show preference for vertical integration of uses. Developments shall ensure that development patterns provide active uses on the Ground Floor that take advantage of the waterfront views and open spaces, and that add presence to public Ways and sidewalks:

The IKEA store is vertically integrated. The store is elevated above two levels of structured parking to minimize its footprint. Stormwater detention is located underground beneath the small surface parking lot and under the bioretention garden at the rear of the site. The ground floor of the building provides access from the street level, Assembly Square Drive and the future IKEA Way at the extension of the future Main Street, and from the ground level of structured parking. The second level of the store provides access to the upper level of structured parking and vertical transportation continuing up to third level sales floor. The truck docks, compactor and recycling are located on an elevated loading/service court situated above two levels of structured parking below.

6.4.7. B.2.h Not have any uninterrupted or unfenestrated length of its façade exceeding thirty-five (35) horizontal feet. Facades greater than one hundred (100) feet in length, measured horizontally, shall incorporate wall plane projections or recesses having a depth of at least three (3) percent of the length of the façade and extending at least twenty (20) percent of the length of the façade; and

The longest length of uninterrupted or unfenestrated façade on the IKEA store building is 32 feet, less than the 35 foot maximum. Each of the four facades of the IKEA store building is longer than 100 feet and each of the four facades has either a wall plane

projection or recess that is greater in depth than three percent of the length of the façade and that also extends greater than twenty percent of the length of the façade.

The four IKEA retail store elevations are shown on the IKEA Elevations Plan.

6.4.7. B.2.i Have windows providing visual access to the interior space, arcades, display windows, entry areas, awnings, or other such features no less than seventy (70) percent of their horizontal length on all Ground Floor facades that face Public Ways or the Mystic River. Forty percent (40%) of this activated façade area on the Ground Floor of Building walls along primary and secondary streets shall consist of windows or doors meant for public entry and exit.

Consistent with IKEA's trade dress design, approximately fifty percent of the west elevation length has windows providing visual access to the interior space, arcades, display windows, entry areas, awnings or other such features, and fifty-five percent of that activated façade area consists of windows or doors meant for public entry and exit.

The four IKEA retail store elevations are shown on the IKEA Elevations Plan.

6.4.7. B.3 Parking Lot Design.
Refer to Section 9.15 for parking requirements. Parking lots shall avoid large expanses that are unbroken by Buildings or substantial landscaped Open space, as set forth in Section 10.4 of this Ordinance.

Section 9.15, Bicycle Access and Parking, requires that 27 bicycle parking spaces be provided on the site. Twenty-seven bicycle parking spaces are provided under the IKEA store building adjacent to the surface parking spaces. The location of the bicycle parking spaces is shown on the Layout and Materials Plan.

Section 9.16 of the Somerville Zoning Ordinance requires that at least 340 parking spaces be provided for the IKEA retail store. A total of 1,367 parking spaces are provided on the IKEA store site. Of that total, 1,194 parking spaces are located under the proposed building on ground level and one level above ground level. The remaining 173 parking spaces are located within a surface parking lot adjacent to the south elevation of the IKEA store building.

Section 9.16 requires that all new parking serving an entirely new building be located in structures that are entirely below grade or extend at least one level above grade except if waived by the SPGA due to market or environmental conditions. Additionally, at grade parking shall be permitted where up to 10% of the overall parking provided in a Development may be located in surface lots in order to provide short-term or temporary parking spaces.

The Planned Unit Development Preliminary Master Plan for Assembly Square, approved on December 14, 2006, established an overall total of 10,146 parking spaces (not including on-street parking). Of this overall total, 1,104 were designated for the Assembly Square Marketplace, which was subject to a separate SPSR-A approval (in which 1,095 surface parking spaces were approved).

Of the remaining overall total parking spaces established in the PUD Preliminary Master Plan, 9,042 spaces, 173 spaces were, and still are on the Phase 1-AA plan, located in a surface parking lot. This represents less than 2% of the overall total parking. Section 9.16 also allows that up to 10% of the overall parking provided in a development may be located in surface lots in order to provide short-term or temporary parking spaces (such as for retail use), therefore the overall development and Phase 1-AA meet the structured parking requirement of the Somerville Zoning Ordinance.

Section 10.4 requires all off-street parking for twenty (20) or more cars to have a portion of the lot's minimum landscape area to be located within the parking lot and/or immediately adjacent to and within five (5) feet of the perimeter of said parking area(s) in the minimum amount of twenty-four (24) square feet for each parking space. The minimum width shall be three (3) feet and the minimum area shall be twenty-four (24) square feet. The required landscape area need not be contiguous, but it is recommended that no parking space be located no more than ninety (90) feet from a landscape area. A minimum of 4,152 square feet of "parking lot landscape area" is required for this surface parking area. Approximately 8,963 square feet of "parking lot landscape area" are provided. Therefore the plan meets this requirement. The surface parking area contains a seven (7) foot wide landscape strip adjacent to Assembly Square Drive and a variable landscape strip along the eastern property line adjacent to the MBTA tracks. In addition there are landscaped islands located in the parking lot to assure no parking space is more than ninety (90) feet from a landscaped area.

Section 10.3 requires one tree per 1,000 square feet of required open space. The IKEA parcel provides approximately 19.4% open space as its share of the overall PUD Preliminary Master Plan open space. Given the site area of 519,739 square feet, the required open space is 100,602 square feet. Therefore 101 trees are required for the site. A total of 125 trees are provided on the IKEA site.

6.4.7. B.4 Open Space.

6.4.7. B.4.a Landscaping strips required in parking areas (Article 10) shall not apply to Usable Open Space calculations.

Usable Open Space has been calculated without counting landscaping strips in parking areas.

6.4.7. B.4.b Developments are encouraged to make significant contributions to Open Space along the Mystic River adjacent to the ASMD. These contributions shall be designed and developed with special attention to the provision of wildlife habitat and contiguous migration corridors, and to help reduce the level of stormwater runoff into the Mystic River.

The PUD Preliminary Master Plan approved on December 14, 2006 identifies areas within the master plan area that are significant areas of open space adjacent to the Mystic River. Those parks and open space adjacent to the Mystic River will be designed and developed in conjunction with phases of the development that are adjacent to them so that the design is cohesive with the adjoining uses.

6.4.7. B.5 Efficiency of Design.

All Developments within the ASMD in excess of 10,000 square feet shall be required to complete an Leadership in Energy & environmental Design (LEED) worksheet and submit the worksheet to the SPGA with permit application materials. This worksheet shall be considered in evaluating whether a proposed Development meets the applicable standards set forth elsewhere in this Ordinance. However, consistency with the LEED standards shall not be a factor in whether or not to permit a Development.

The proponent has completed a LEED worksheet and included the worksheet in the application booklet. The focus of the worksheet relates to Sustainable Sites and Water Efficiency.

6.4.7. B.6 Contributions.

Contributions for Infrastructure and Open Space related to a Development made by an Applicant to the City or its constituent agencies in other agreements or permits shall be credited by the SPGA toward any applicable requirements hereunder for a Special Permit.

The Proponent and IKEA have committed to make significant contributions to the City and to the Commonwealth for infrastructure and open space related to the Project and the overall development of the Assembly Square area.

To date, the following contributions have been paid to the City:

- \$1 million for design and construction of Trum Field, Hodgkins-Curtin Park, Harris Playground, Grimmons Playground, North Street Playground, Central Hill Playground, or other municipal purposes, upon execution of an Amended and Restated Assembly Square Development Covenant By and Between Federal Realty Investment Trust, IKEA Property, Inc., City of Somerville, and Somerville Redevelopment Authority and a Master Land Disposition Agreement By and Between Somerville Redevelopment Authority and Federal Realty Investment Trust.
- \$1 million for municipal purposes, upon receipt of a fully vested Certificate of Occupancy for the Assembly Square Marketplace.
- \$250,000 for the study, design and implementation of circulation improvements within and/or affecting Assembly Square area.
- \$250,000 for design and construction of improvements to that portion of the Department of Conservation and Recreation park along the Mystic River abutting the development area.
- \$150,000 for the Somerville Affordable Housing Trust Fund.
- \$100,000 to study the feasibility of a new MBTA Orange Line station at Assembly Square.
- \$100,000 for construction of pedestrian walkways to mitigate traffic in the Assembly Square area.
- \$100,000 to study the feasibility of a Rt. 28 pedestrian crossing/undercarriage.
- \$75,000 for public art to be installed on the Mystic River park.
- \$50,000 for East Somerville neighborhood improvements.
- \$50,000 for Ward 4 neighborhood improvements. \$30,000 for the repair of a traffic signal at the intersection Foley St. and Middlesex Ave.

In addition, the Proponent and IKEA have committed to the following future contributions to the City:

- IKEA will contribute \$1 million for municipal purposes upon issuance of a fully vested Special Permit with Site Plan Review – A for the IKEA store.
- The Proponent will contribute \$1 million for municipal purposes upon securing all necessary approvals, authorizations and appropriations for funding pursuant to certain public infrastructure financing programs.
- The Proponent will contribute \$600,000 for municipal purposes upon issuance of a building permit for any building that is part of the PUD Preliminary Master Plan, excluding the IKEA store and the Assembly Square Marketplace.
- IKEA will contribute \$100,000 for traffic mitigation and improvements on and near lower Broadway upon issuance of a fully vested Special Permit with Site Plan Review – A for the IKEA store.
- The Proponent will contribute another \$100,000 to the Somerville Affordable Housing Trust Fund.

Furthermore, the Proponent and IKEA have committed to the City, provided certain conditions are met, to contribute up to \$15 million combined for the design and construction of a new MBTA Orange Line station at Assembly Square.

6.4.7. B.7 Loading Spaces.

To the extent possible, Loading spaces shall be located away from major Public Ways, the Mystic River and other highly visible locations. Every effort shall be made to incorporate creative design to reduce the negative visual impacts of the Loading space.

Receiving for the IKEA store is located on an elevated loading/service canopy over a portion of the structured parking on the east side of the building; eight loading spaces and six loading doors are located on the loading canopy. In addition to the receiving doors, IKEA's four recycling containers and compactor (accessed internally) are located on the canopy as well. The loading canopy is separate from all visitor parking areas and access to the loading canopy is by a "trucks only" signed ramp from the east side of the surface parking lot.

A separate Home Delivery loading area is located on the north side of the IKEA store building within a screened truck well. Access to this loading area is from a service court adjacent to the future IKEA Way.

6.4.8 Development Standards and Design Guidelines for Large Developments

A Large Development in the ASMD shall be regulated as a Planned Unit Development-A (PUD), and the procedures for such Large Development shall be those set forth in Article 16, as augmented by this Subsection. No Large Development shall be permitted in the ASMD under any other provision of this Ordinance except those qualifying for the Priority Development Process. Priority Permitted Uses are not subject to this Section 6.4.8.

The development standards and design guidelines for Large Developments shall be as set forth in this Section 6.4.8. In addition to the submission requirements of Article 16, all applicants for Large Developments must also provide the Special Permit Granting Authority (SPGS) or its designee with the additional submissions listed below in order for any application for the PUD-A Master Plan to be considered

complete. Large Developments, which do not qualify as Priority Permitted Uses but are submitted as part of a Priority Development Process, shall also conform to the standards and guidelines set forth in this Section 6.4.8 even though they are not required to be regulated as a PUD-A.

6.4.8. A Traffic Access and Impact Study, including a Transportation Demand Management Plan.

A Traffic Impact and Access Study is included as part of this Phase 1-AA application. An executive summary of the findings and recommendations presented in the study is included in the application booklet. The study area includes the same locations analyzed in the PUD Traffic Impact and Access Study, but this assessment focuses solely on the Phase 1-AA component of the overall development. The study documents existing conditions and planned future conditions both with and without the project. Mitigation measures are identified in the study to mitigate the project's traffic-related impacts, and also to provide certain infrastructure improvements in advance of the latter phases of the overall project under which that mitigation is actually required based on the analysis results.

6.4.8. B Model. A conceptual three-dimensional scale model of the Master Plan at 20 scale or alternative scale acceptable to the SPGA or its designee. If the proposed development in its entirety consists of no more than one building, the SPGA or its designee has the option of waiving this requirement.

A three dimensional model of the Master Plan has been prepared and was submitted as part of the Planned Unit Development Preliminary Master Plan application. The design of Phase 1-AA is substantially unchanged since the submission of the model; therefore the model need not be revised or duplicated for the sake of this filing and review.

6.4.8. C Urban Block Plan. The PUD Preliminary Master Plan should reflect a future street grid orientation substantially in conformity with the ASD Plan, and outline street blocks substantially consistent with the average street blocks in the City of Somerville (3.5 acres without streets, 4.5 acres to the middle of streets).

The PUD Preliminary Master Plan does reflect a street grid orientation substantially in conformity with the ASD Plan. The IKEA store site is unique in its shape and its use within the Master Plan area. The parcel on which the IKEA store sits is the minimum size capable of fitting the IKEA store footprint given its shape constraints and at 11.9 acres, this site is considerably smaller than other IKEA retail store sites around the United States that do not incorporate two levels of structured parking under the building.

6.4.8. D Development Standards. Except for Priority Permitted Uses, all Large Developments shall meet the development standards set forth above in Section 6.4.7.A for Developments, as well as consider the design guidelines set forth above in Section 6.4.7.B. In addition, Large Developments shall be consistent with the following additional standards.

6.4.8. D.1.a, b, c result in a net reduction in level of service of intersections equivalent to one full letter grade; result in an increase of 10 seconds of delay to a signalized or unsignalized intersection to level-of-service C or lower; or result in a net increase in traffic volumes of 10% or more at an intersection that has an accident history of more than 5 accidents in the last three years for which data is available.

This phase of the PUD involves the construction of IKEA and Assembly Square Drive. An executive summary of the findings of the current traffic assessment for this phase is included in the application booklet, and as noted earlier, a Traffic Impact and Access Study has also been prepared for this phase of the project. As with the prior PUD study, this assessment includes the Assembly Square Marketplace building space as part of its existing conditions analysis. This phase of the PUD includes a portion of the IKEA building program that was previously approved by the City at the site along the Mystic River water's edge, including off-site traffic mitigation. This application is for a smaller program which does not include the 208,000 sf of office space and 49,000 sf of retail/restaurant space previously proposed as part of the IKEA project at its former waterfront location. Therefore, the mitigation measures identified will be used for this application in addition to other measures (i.e., construction of Assembly Square Drive, reconstruction of Route 28/Assembly Square Drive and Route 28/Middlesex Avenue intersections, etc.) intended to mitigate latter phases of the overall development project. The planned modification of the Route 28/Assembly Square Drive intersection to allow exiting left turns will result in more than 10 seconds of delay for the overall intersection. However, by allowing left-turns at this location the operation of the adjacent Route 28/Middlesex Avenue intersection (which operates under the same signal controller) will be improved as the exiting left-turn demand from Middlesex Avenue will in turn be reduced. Both intersections are expected to remain at LOS B or better under the Build condition for this project with this mitigation in place (which is intended to mitigate latter phases of the project and not specifically Phase 1-AA).

6.4.8. D.2 Large Retail Projects. Any Large Development in which any single Retail Use is more than 50,000 square feet of gross floor area shall also be deemed a Large Retail Project, except for those Developments qualifying as Priority Permitted Uses, and shall be subject to the following additional standards:

6.4.8. D.2.a Non retail Component. No Large Retail Project, as defined above, shall be permitted in the ASMD unless permitted as part of a PUDA which includes 1.5 net square feet of non retail uses for every square foot over 50,000 net square feet of Retail Use in the Large Retail Project. For example, a PUD-A with 100,000 square feet of Retail use must also include at least 75,000 square feet of non retail uses.

Phase 1-AA is part of a PUD-A Preliminary Master Plan approved by the SPGA on December 14, 2006. The PUD-A Preliminary Master Plan contains 1.1 million square feet of retail and would therefore require at a minimum, 1.6 million square feet of non-retail use to meet this requirement. Because the Master Plan contains in 1.75 million square feet of office in addition to the other non-retail uses, the Master Plan and therefore this Phase 1-AA meets the above-mentioned criteria.

6.4.8. D.2.b Ground Level Retail Size Cap. In a Large Retail Project, not more than 50,000 square feet of Gross Floor Area of any single Retail Use shall be located on the Ground Floor of any Building included in the PUD-A.

The ground level of the proposed IKEA will be principally occupied by entry and exit vestibules, mechanical and storage rooms and has a floor area of 14,219 square feet, less than the maximum allowed 50,000 square feet, therefore Phase 1-AA meets this requirement.

6.4.8. D.3 Landscaping. A minimum of fifty percent of the Landscaped Area in a new Large Development shall be Usable Open Space. The SPGA shall have final discretion in deciding if land constitutes Open Space for the purposes of determining whether this requirement has been met. The Open Space requirement may be met with land that is part of the Large Development, or with land that is outside of the Large Development area but is located within the ASMD that was not already Usable Open Space, provided that the conditions of paragraph 2 of Section 16.6.1 of the Ordinance relating to public dedication of such usable Open Space are met.

Open Space and Useable Open Space requirements within the Assembly Square Mixed Use District are 25% and 12.5% respectively. The Preliminary Master Plan approved by the City of Somerville on December 14, 2006, provides that the Open Space and Useable Open Space requirements are met in the aggregate over the entire PUD area. In order to consolidate the Open Space and Useable Open Space to the maximum extent practicable, some parcels within the PUD area may exceed the open space requirements, while others may, within their individual property lines, contain less than the prescribed open space area. The Master Plan strives to locate the open space in proximity to the water and in aggregated areas that provide connection from the development to the water. As such, the majority of the open space within the PUD is located closer to the water. Given that the IKEA retail store is located within the PUD area furthest from the water, it follows that the IKEA site will contain less than the average or required open space. The area of Open Space on the IKEA site is 100,602 square feet. The area of Useable Open Space on the IKEA site is 81,992 square feet. The total area of the IKEA parcel is 519,738 square feet. Therefore Open Space is 19.4% of the total parcel area and Useable Open Space is 15.8% of the total parcel area. A summation of open space is included on the Zoning Summary chart located on the Layout and Materials Plan and on an accompanying Open Space and Useable Open Space plan provided in the application booklet.

6.4.8. E Design Guidelines. In addition to the design guidelines set forth in Section 6.4.7 for Developments, the SPGA shall also consider the following additional guidelines in their review of Large Developments as part of a PUD-A or as part of a Priority Development Process to the extent such Large Developments are not Priority Permitted Uses. These guidelines augment Article 16 guidelines. These guidelines are intended to serve as a general basis for the SPGA and Applicant alike to discuss the design merits of a Development, but are not intended to inhibit design creativity when the application otherwise conforms to all other substantive review criteria. These guidelines are not intended to discourage innovative architectural design solutions. Rather, they provide general standards for the massing, sitting and articulation of Buildings for developers and architects to work from. They also provide parameters for dialogue between the Applicant and SPGA on design issues:

6.4.8. E.1 Structured Parking. Due to the size and scope of Large Developments, every effort shall be made to provide as much parking as possible underground and/or in structures. Refer to Section 9.15 for parking requirements.

Section 9.15, Bicycle Access and Parking, requires that 27 bicycle parking spaces be provided on the site. Twenty-seven bicycle parking spaces are provided under the IKEA store building adjacent to the surface parking spaces. The location of the bicycle parking spaces is shown on the Layout and Materials Plan.

Section 9.16 of the Somerville Zoning Ordinance requires that at least 340 parking spaces be provided for the IKEA retail store. A total of 1,367 parking spaces are provided on the IKEA store site. Of that total, 1,194 parking spaces are located under the proposed building on ground level and one level above ground level. The remaining 173 parking spaces are located within a surface parking lot adjacent to the south elevation of the IKEA store building.

Section 9.16 requires that all new parking serving an entirely new building be located in structures that are entirely below grade or extend at least one level above grade except if waived by the SPGA due to market or environmental conditions. Additionally, at grade parking shall be permitted where up to 10% of the overall parking provided in a Development may be located in surface lots in order to provide short-term or temporary parking spaces.

The Planned Unit Development Preliminary Master Plan for Assembly Square, approved on December 14, 2006, established an overall total of 10,146 parking spaces (not including on-street parking). Of this overall total, 1,104 were designated for the Assembly Square Marketplace, which was subject to a separate SPSR-A approval (in which 1,095 surface parking spaces were approved).

Of the remaining overall total parking spaces established in the PUD Preliminary Master Plan, 9,042 spaces, 173 spaces were, and still are on the Phase 1-AA plan, located in a surface parking lot. This represents less than 2% of the overall total parking. Section 9.16 also allows that up to 10% of the overall parking provided in a development may be located in surface lots in order to provide short-term or temporary parking spaces (such as for retail use), therefore the overall development and Phase 1-AA meet the structured parking requirement of the Somerville Zoning Ordinance.

The proposed IKEA store site is designed to minimize surface parking. Of the 1,367 parking spaces provided on the IKEA store site, 1,194 of the spaces are located under the proposed store in two levels of structured parking. Standard parking spaces will be 9-feet by 18-feet, standard accessible parking spaces will be 14-feet by 18-feet, and van accessible spaces will be 18-feet by 18-feet. There are no compact spaces proposed. Drive aisles within the surface and structured parking areas will be 24-feet wide.

Access to the IKEA store parking is provided from both Assembly Square Drive and the site driveway (future IKEA Way) on the north side of the building. The driveway from Assembly Square Drive is a median-divided access; one entrance lane and two exit lanes are available to passenger vehicles. A separate truck only entrance is also provided

from Assembly Square Drive. The surface parking lot is connected by drive aisles to the parking under the building. There are two access points into the structured parking from the future IKEA Way; both are located toward the rear of the site and are two lane, two-way driveway openings. The second level of parking is accessed from the ground level parking by two separate, two-way ramps.

ARTICLE 16: SPECIAL PERMITS, SPECIAL PERMITS WITH SITE PLAN REVIEW, SITE PLAN APPROVAL AND VARIANCES

16.8.3. PUD Final Level Application

Having received preliminary approval at the City level and certification under MEPA from the Secretary of Energy and Environmental Affairs at the state level, the proponent is pleased to now apply to the Planning Board for a final level approval of the first phase (Phase I-AA) of the *Planned Unit Development (PUD) Preliminary Master Plan, Assembly Square, Somerville, MA*. This first phase was preliminarily approved by the Planning Board on December 14, 2006 with conditions. It involves construction of a 340,000 SF IKEA retail store, relocated away from its previously approved location on the Mystic River, and construction of a new roadway, Assembly Square Drive, which will become the main boulevard of the fully built out Assembly Square area. Together, the relocated IKEA and the new Assembly Square Drive constitute "the Project" for the purposes of this application.

The scope of the Phase I-AA application is in conformance with the previously approved Master Plan. The size of the building remained the same at 340,000 square feet, the number of parking spaces dropped from 1,392 in the Master Plan to 1,367 for the Phase I-AA design and the alignment of Assembly Square Drive is consistent with the PUD filing. It is important to note that the open space and usable open space requirements of the Master Plan were 25% and 12.5 % respectively and the PUD submission provided 26.5% and 15% based on an aggregate for all phases of the master plan. The IKEA site provides 19.4% Open space and 15.8% Usable Open Space

16.12 Denial Letter

After submission of the initial Preliminary Master Plan application, no further denial letter shall be required for modifications to, or phases of, the Master plan, or for any permit application (including an SPSR-A) related to the PUD. However, for reference purposes, a copy of the Building Permit application dated October 24, 2006 and a copy of the Denial Letter dated October 25, 2006 are included in the application booklet.

PLANNED UNIT DEVELOPMENT PRELIMINARY MASTER PLAN APPROVAL CONDITIONS

Condition A: Traffic Management/Traffic Circulation: revise TIAS in consideration of Peer Review Comments and expand study area.

Condition A identifies the major actions to be taken prior to Phase 1A to include expanding the impact study area, documenting/justifying trip generation rates, and trip distribution and trip reduction rates. Further, the applicant shall consider issues discussed in Peer Review Memoranda; consider all recommendations referenced in the Traffic Impact and Access Study Memo, On-site Circulation Memo and the Pedestrian and Bicycle Circulation Memo prepared by the City's peer review consultant; and work with the Massachusetts Highway Department, the Department of Conservation and Recreation, and the City of Somerville to include visible signage that will direct traffic to the site.

The applicant and its consultants have begun work on the expanded impact study area; coordinating and conducting additional traffic counts at new study area intersections in Boston, Somerville and Medford. Since the Planned Unit Development Preliminary Master Plan for Assembly Square was approved by the Planning Board, the applicant and its consultants have attended a series of ongoing meetings with the City of Somerville and its transportation peer review consultant. As a result of this regular dialogue, the scope and number of issues noted in the peer review have been narrowed to mostly technical, methodology-related matters with general concurrence having been reached on the major issues identified. Likewise, the details of the proposed off-site improvements for Phase 1AA and the proposed Assembly Square Drive infrastructure have been further refined through this process. The applicant and its consultants will continue to meet with the City and its transportation consultant on a regular basis to achieve a final resolution on the remaining items noted. Through this process the scope and details of the major actions required to be undertaken prior to Phase 1A will be clearly defined, so that this condition will be met.

Condition B: Water system

Condition B-1: Additional Water system analysis

The existing water system for the Assembly Square area consists of 8" and 12" mains connected to a 20" main located along Middlesex Ave and a 12" metered tie in (MWRA Meter 91) at the intersection of Fellsway Parkway and Middlesex Ave. The proposed system upgrades include a 20" connection to the existing 20" main in Middlesex Ave then continuing south on Middlesex Ave to Foley Street then east on Foley Street to the new Assembly Square Drive. The proposed 20" main would be extended north on Assembly Square Drive back to Meter 91 and south along Assembly Square Drive about 100 feet past the proposed IKEA and tie back into the existing 12" main. A section of 20" main will also be extended east in the proposed IKEA Way. A 16" fire loop will be installed around IKEA from Assembly Square Drive to IKEA Way.

The proposed system was modeled for full build based on providing a minimum of 4,780 gallons per minute (gpm) at 20 pounds per square inch (psi) pressure. This includes water use and fire demand. Existing hydrant flow testing completed in March 2007 indicated flows of 5,645 gpm at 20 psi.

Condition B-2: Fire Protection Engineer determine fire protection requirements for each building.

Phase I-AA only has one building, the proposed IKEA. The fire protection requirements for IKEA are 3500 gpm at 40 psi with a minimum 12" fire protection line. The proposed design incorporates a 16" fire loop with hydrants at 300' spacing. Based on the system model for full build conditions the flow would be 3,784 gpm at 40 psi. In the full build scenario the flow would drop to 3,279 gpm at 40 psi therefore the IKEA building will incorporate a fire pump. In addition the locations of fire hydrants have been coordinated with the fire department.

Condition B-3: Water – Materials in accordance with COS Water and Sewer Enterprise specifications.

The proposed water system will comply with COS Water and Sewer Enterprise specifications.

Condition B-4: Water – consider installing additional fire hydrants at specific locations.

The locations of hydrants will be coordinated with the fire department and the building fire protection engineer to provide appropriate fire protection coverage.

Condition B-5: Water – Install valves at all intersections.

Valves will be installed at all intersections. Specific locations will be coordinated with the water department.

Condition B-6: Water – Calculations to determine water connections at each property.

The proposed water system design for the full build condition has been designed and placed in a water model. The full build water demand was calculated to be 4,780 gpm which includes a minimum 3,500 gpm fire flow and a 1,280 gpm maximum daily demand at a minimum of 20 psi. The required water use for the IKEA building has been analyzed for both daily demand and fire flow and the 16" loop around the IKEA building from Assembly Square Drive to IKEA Way will be able to provide the required volume of water for fire flow and daily use.

Condition C-1: Sewer – Provide profiles of proposed sewers.

The proposed sewer mains to be located in Assembly Square Drive have been designed service the full build conditions to avoid future disturbance of Assembly Square Drive. The same applies to sections of Foley Street, New Road and IKEA Way. The proposed design consists of an 8" main beginning at "A" Street then increasing to a 12" main at C Street then to an 18" at Foley

Street and finally tying into an existing COS manhole at North Union Street. The existing main from the COS manhole ties into the MWRA Somerville Medford Branch Sewer. Profiles of proposed sewers are included in the plan set.

Condition C-2: Sewer – Submit details of proposed pipe materials for review and approval.

The proposed sewer pipe material is PVC SDR 35. Details of the proposed sewer system components are located on the plan set detail sheets.

Condition C-3: Sewer – Provide “whenever possible” minimum horizontal distance of 10’ between sewer and water lines.

The sewer has been designed to provide at least 10’ of separation from water lines where possible.

Condition C-4: Sewer – Evaluate impact of proposed project flows on MWRA interceptor and municipal systems.

Currently sewer flow from the Assembly Square area and a large portion of the City of Somerville west of Route 28 and 93 including the Ten Hills area flows into the MWRA Somerville Medford Branch Sewer then on to Deer Island. Although the Assembly Square area has little Infiltration and Inflow (I/I) problems due to age of mains and the separation of storm and sanitary sewer mains, the remainder has I/I issues due to combined sewers. During normal conditions and small storm events the sewage and storm water flows to Deer Island but during heavy rains the MWRA Somerville Medford Branch Sewer becomes surcharged and over flows into the MWRA 84” Marginal Conduit located along the Mystic River and discharges below the Amelia Earhart Dam. The proposed sewer design ties into a COS sewer which connects to the MWRA interceptor on North Union Avenue. The proposed mitigation in the Ten Hill area will remove I/I at a ratio of four gallons of I/I removed for each gallon of sewer flow. The proposed mitigation will remove four times the proposed flow scheduled to go into the MWRA Somerville Medford Branch Sewer at the proposed North Union Street connection which will allow the sewer flow from Phase I-AA to be added without any negative impacts.

Condition D-1 Stormwater – Additional information verifying adequacy of Somerville Marginal Conduit.

Currently storm water run off from the Assemble Square area is captured by catch basins and directed to storm water outfalls that tie into the Somerville Marginal Conduit (SMC) or runs over land to the Mystic River. The main tie into the SMC is a 36” connection. The 36” connection is preceded by a section of 60” pipe that runs back to the east side of Foley Street where it reduces back to a section 36” pipe which connects to a 48” pipe in Foley Street. From this connection point a 24” and a 48” pipe continue West on Foley Street to

Assembly Square Drive then south to Assembly Square drive. The existing connection to the SMC allows a maximum flow rate of 76 cubic feet per second (cfs) for a 10 year design storm as the 36" acts as a restriction and the section of 60" pipe provides storage.

The proposed storm water design for Assembly Drive and portions of Foley Street and IKEA Way was designed for the full build scenario based on COS standards for a 10 year storm. The IKEA site was designed for a 25 year storm and graded to provide minimum impacts from a 100 year storm. To the south of IKEA a 36" pipe connects to an existing 18" pipe and changes to a 36" pipe at the IKEA then to a 42" pipe at the former alignment of Assembly Square Drive to pick up an existing 24" pipe then changes to a 60" pipe and turns east onto Foley Street to tie into the existing 60" pipe. From the northern section of Assembly Square Drive a 30" in pipe will start at "A" Street then change to an 36" pipe at "D" Street and connect to the proposed 60" pipe at Foley Street. A portion of 36" pipe from Foley Street to the 60" pipe will be replaced. The existing connection to the SMC will remain. The site design of IKEA will incorporate two sub surface detention systems to manage site storm water discharge. Due to potential site contamination no infiltration is proposed.

This proposed design will match the existing discharge rate into the SMC and will not affect the capacity of the conduit.

Condition D-2 Stormwater – Further investigate alternative drainage design.

The alternate drainage design involves replacement of the existing 36" connection to the SMC with a new outfall that discharges below the

Amelia Earhart Dam into the tidal portion of the Mystic River. The new outfall would tie into the proposed 60" pipe on Foley Street and continue east under the MBTA Orange Line tracks across the Draw 7 Park and discharge south of the existing SMC.

Condition D-3 Stormwater – Provide status report on MWRA permits.

Received final MWRA-8 approval for sewer in IKEA property. Will apply for appropriate permit for main connection.

Condition D-4 Stormwater – Provide more detailed analysis of site hydrology.

A detailed stormwater analysis has been completed and is included as part of this submission. Included in the analysis are test pit logs, maintenance plan and TSS calculations. Stormwater runoff from the IKEA site will be managed on site and the flow from Assembly Square Drive will not exceed existing peak discharge rates and there will not be a need to seek additional permitting from MWRA or Con Com for stormwater discharge issues.

Condition D-5 Obtain DCR permits.

No DCR permit is required for this phase.

- Condition D-6 Stormwater – Provide copies of test pit logs and locations for review.
- In April of 2007 Haley & Aldrich constructed test pits in the locations of the proposed sub surface detention systems. The proposed detention systems will not incorporate infiltration. The logs of the test pits are included in the storm water analysis report.
- Condition D-7 Stormwater – Detailed series of BMPs to demonstrate 80% TSS.
- The proposed stormwater system for IKEA will incorporate deep sump catch basins with hoods, parking lot sweeping and a particular separator. All surface stormwater will pass through the separator prior to entering the sub surface detention system. In addition, the stormwater runoff from the elevated loading dock will be directed through a sediment fore bay and into a vegetative settling basin that will allow the water to infiltrate into a sub surface detention system which will eventually connect to the storm water drain in IKEA Way.
- The inlets along the streets will have hoods and deep sumps plus stormwater will pass through offline particle separators. Please refer to the Stormwater Analysis report for TSS removal calculations.
- Condition D-8 Stormwater – Construction sequence, limits of phasing, placement of erosion control plans.
- An interim construction plan is included in the plan set that shows limits of construction and location of erosion control.
- Condition D-9 Stormwater – Stormwater Maintenance Plan addressing frequency of inspection/cleaning of proposed WQUs; plan to identify owner and maintenance parties.
- A detailed stormwater analysis has been completed and is included as part of this submission. Included in the analysis are test pit logs, maintenance plan and TSS calculations.
- Condition D-10 Stormwater – Submit a soil management to determine if conditions will allow for LID elements.
- Due to soil contamination no infiltration is proposed for stormwater management. The site design does however propose a vegetative bio-swale to treat run off from the elevated truck area.
- Condition E-1 Urban Design – Provide updated overall master plan depicting dimensions, street sections, circulation/operation, building entrances and phased plan of infrastructure.
- A revised overall Master Plan is included in the plan set.

- Condition E-2 Urban Design – Review geometry of IKEA Way with Fire Department.
- The proposed layout of IKEA Way and Assembly Square Drive will be reviewed by the fire department. Both roadways were designed to accommodate the fire department's older ladder truck which has the most restrictive turning movement.
- Condition E-3 Urban Design – Reconsider the design of Main Street at IKEA loading area (IKEA Way at Main Street) to create more positive architectural character.
- IKEA is working with the COS to design a more aesthetic appearance. The proposed improvements include screening the elevated loading docks, use of landscaping to create a "green wall" and to break up the façade and the inclusion of a freestanding architectural element.
- Condition E-4 Urban Design – Study integration of T Station into the site plan; 1) visibility of station, 2) plaza and arrival sequence connected to Assembly Square Park.
- The IKEA will be visible from the new T station. For this phase a pedestrian access will be provided through the IKEA parking field that will link the store entrances to IKEA Way. From the connection point on IKEA Way pedestrians can walk west along the sidewalk to the park at the intersection of IKEA Way and Assembly Square Drive or east toward the MBTA tracks and future T station.
- Condition E-5 Urban Design – At each SPSR submission that involves DCR land, submit confirmation of the acquisition of the DCR land or reconfigure the development for such phase consistent with requirements of Master Plan and SZO.
- No DCR land is involved in this phase.
- Condition E-6 Urban Design – At each SPSR submission, consider massing the buildings to create more consistent street corridors, with similar heights on both sides of the street, using street walls and step-backs, especially where building exceeds six to eight stories.
- This phase only includes one building, the four story IKEA building. The placement of the building along Assembly Square Drive is consistent with other commercial buildings in the immediate area including the Home Depot directly across the street.

- Condition E-7 Urban Design – Phase 1AA, provide plan for the pedestrian crossings for the entire project.
- The design of Assembly Square Drive, IKEA Way and work on cross streets like Foley and New Road will incorporate pedestrian crossings; please refer to the plan set. In addition as part of the off site mitigation pedestrian improvements will be made at the intersections of Lombardi Drive and Mystic Ave, Kensington Ave and Mystic Ave, Route 28 and Assembly Square Drive and Route 28 and Middlesex Avenue.
- Condition E-8 Urban Design – Design and make improvements to the following pedestrian crossings:
- Ten Hills neighborhood: The proponent will make revisions to the Assembly Square Drive and Fellsway (Route 28) and Fellsway (Route 28) and Middlesex Avenue intersections including turning lane reconfiguration, pedestrian cross walks and pedestrian signal boxes. In addition the proponent will make improvements to provide a pedestrian undercarriage below the Wellington Bridge.
- Condition E-8 Urban Design – Design and make improvements to the following pedestrian crossings:
- Lombardi Drive and Mystic Avenue: revise alignment to match Assembly Square Drive, install new sidewalks and access ramps on both sides of the street, install pedestrian signal box and stripe cross walks.
 - Mount Vernon Street and Lombardi Drive: stripe cross walks, pedestrian boxes and signal modifications at this intersection. In addition, construct new sidewalk along the east side of Lombardi Street from Mount Vernon Street to Mystic Avenue
- Condition E-9 Urban Design – Provide calculations showing: 1) percentage of open space and usable open space meet zoning requirements for PUD-A and ASMD; and 2) setbacks from Mystic River to closest building are at least 150 feet.
- The open space for the approved Master Plan was evaluated on a full build condition not by individual phases. The required and provided open space and useable open space percentages of site area are shown on the Layout and

Materials sheet of the IKEA site plan set.

The only building in this phase is the IKEA store and it is set back more than 150 feet from the Mystic River, refer to Overall Master Plan.

- Condition E-10 Urban Design – Illustration of the drawings of the continuous pedestrian, bicycle, vehicular and Urban Ring connections to destinations enumerated in the ASD Plan.

Assembly Square Drive is the main connection not only for this phase but the entire Assembly Square development and includes side walks on both sides of the street and lanes wide enough to provide bicycle accommodation. Please refer to the Overall Site Plan.

- Condition E-10a Urban Design – Clarification of pathways and sidewalk systems.

Please refer to the Overall Site Plan in the plan set for an overall view of the sidewalk system.

- Condition E-10b Urban Design – Illustration of how particular phases affect the accessibility and visibility of the proposed T station.

The project includes sidewalks that will link the proposed IKEA to the T station when it is finally built. Please refer to the included Overall Master Plan sheet to see locations of buildings and associated phases.

- Condition E-10c Urban Design – Confirmation that the zoning requirements related to minimum shadow cast by buildings onto open space between March 21 and September 21 are met.

The proponent has completed a shadow study. Due to the location of the open space on site and the IKEA park there will be no impacts for the months of March and September and some impact for the month of December however plantings will be in a dormant state.

- Condition E-10d Urban Design – ensure that light conditions shown on the plans are adequate for the tree species enumerated in Unifying Design Guidelines for the Public Realm – Assembly Square.

The proposed landscape plans for Assembly Square Drive and IKEA incorporate tree species that are suitable for urban environments.

- Condition E-10e Urban Design – Provide illustration and notation that all shade trees and shrubs required by zoning are shown in all parking areas.

The required number of trees are shown in the parking area. Please refer to the Landscape Plan for actual number and type of tree.

- Condition E-10f Urban Design – Employ “smart growth” techniques in overall development; i.e., LID for stormwater, bio-swales, recycling, sustainable green technologies

and LEED.

The IKEA site design will include approximately 2 acres of green roof and will have a bio swale to treat run off from the elevated truck dock. The design will also use drought tolerant landscaping in order to eliminate the need for irrigation.

- Condition E-10g Urban Design – Applicant and City responsibilities for design, construction, maintenance, repair, usage costs, trash removal, street sweeping, utility cleaning.

The proponent will construct the roadway improvements, off site mitigation improvements and utility infrastructure to support the project with the anticipation that the COS will take ownership. The particulars will have to be established in a Development Covenant between the proponent and the COS.

- Condition E-11 Urban Design – Provide details for the pedestrian connection from Assembly Square to Draw 7 Park under the railroad bridge.

The pedestrian access from Assembly Square to Draw 7 Park that runs under the rail road bridge will remain the same. Presently pedestrians would walk along Foley Street in an easterly direction along the driveway for 85 Foley Street then turn north on another road then east at the under pass before the Winter Hill Yacht Club.

The proposed work under this phase will maintain Foley Street so both pedestrians and vehicles can use this access.

- Condition E-12 Urban Design – Provide landscape buffer between tracks and development.

The site design for the IKEA includes a landscape buffer strip between the MBTA tracks and the IKEA store and parking lot. Please refer to the Landscape plans included in this submission.

- Condition E-13 Urban Design – Show pedestrian connection from the proposed T station to Draw 7 Park. Design of project shall not preclude future construction of this condition.

The scope of this phase does not include any design work on the T station or additional connections to Draw 7 Park. The scope of work does include the construction of a portion of IKEA Way and this work does include sidewalks and a pedestrian walkway through the ground floor IKEA parking field located under the building. The scope of work does not preclude future construction of a pedestrian connection from the T Station to Draw 7 Park.

- Condition E-14 Urban Design – Clarify “Kiss and Ride” drop off.

Although not part of this phase, the “Kiss and Ride” drop off will be a striped area where vehicles can unload and pick up passengers using the T station.

- Condition E-15 Urban Design – Review the bus stop at the T station.
The bus stop for the T station will not be designed until Phase I-A
- Condition E-16 Urban Design – Consider plans to link the Mystic River Park to the surrounding street circulation.
This connection will not be designed until Phase I-A
- Condition E-17 Urban Design – Provide more detail on the “pocket parks.”
The layout and design of the park located at the IKEA Way and Assembly Square Drive intersection is included in the plan set.
- Condition E-18 Urban Design – Depict locations of accessible curb ramps.
Curb ramps have been designed for all areas where applicable and are shown on the various plans for the IKEA, Assembly Square Drive and the off site improvements.
- Condition E-19 Urban Design – Submit detailed landscaping plans relating to street trees.
The application package includes a detailed street tree planting plan for Assembly Square Drive.
- Condition E-20 Urban Design – Continue to work with City on the design of the proposed median in Assembly Square Drive in order to maximize the amount of usable open space.

Requested Waiver: Approval Conditions

The applicant is hereby requesting the Planning Board to make the following determinations with respect to the conditions in the Planned Unit Development Preliminary Master Plan approval, dated December 14, 2006, as they relate to Phase 1AA:

1. **Condition A:** That Condition A has been met with respect to Phase 1AA.
2. **Condition B:** That Conditions B-1 through B-6 have been met with respect to Phase 1AA.
3. **Condition C:** That Conditions C-1 through C-4 have been met with respect to Phase 1AA.
4. **Condition D:** That Conditions D-1 through D-10 have been met with respect to Phase 1AA.
5. **Condition E:** That Conditions E-1 through E-4, E-7 through E-10, E-12 and E-17 through E-20 have been met with respect to Phase 1AA. That Conditions E-5, E-6, E-11 and E-13 through E-16, pertain to phases of the PUD subsequent to Phase 1AA and are therefore waived with respect to Phase 1AA due to the following:

Condition E-5: Urban Design – At each SPSR submission that involves DCR land, submit confirmation of the acquisition of the DCR land or reconfigure the development for such phase consistent with requirements of Master Plan and SZO. No DCR land is involved in this phase.

Condition E-6: Urban Design – At each SPSR submission, consider massing the buildings to create more consistent street corridors, with similar heights on both sides of the street, using street walls and step-backs, especially where building exceeds six to eight stories.

This phase only includes one building, the four story IKEA building. The placement of the building along Assembly Square Drive is consistent with other commercial buildings in the immediate area including the Home Depot.

Condition E-11: Urban Design – Provide details for the pedestrian connection from Assembly Square to Draw 7 Park under the railroad bridge

The pedestrian access from Assembly Square to Draw 7 Park that runs under the rail road bridge will remain the same. Presently pedestrians would walk along Foley Street in an easterly direction past Green Cab then turn north on another road then east at the under pass before the Winter Hill yacht club.

The proposed work under this phase will maintain Foley Street so both pedestrians and vehicles can use this access.

Condition E-13: Urban Design – Show pedestrian connection from the proposed T station to Draw 7 Park. Design of project shall not preclude future construction of this condition.

The scope of this phase does not include any design work on the T station or additional connections to Draw 7 Park. The scope of work does include the construction of a portion of IKEA Way and this work does include sidewalks and a pedestrian walkway through the ground floor IKEA parking field located under the building.

Condition E-14: Urban Design – Clarify “Kiss and Ride” drop off
Although not part of this phase, the “Kiss and Ride” drop off will be a striped area where vehicles can unload and pick up passengers using the T station

Condition E-15: Urban Design – Review the bus stop at the T station.
The bus stop for the T station will not be designed until a later phase of development.

Condition E-16: Urban Design – Consider plans to link the Mystic River Park to the surrounding street circulation.
This connection will not be designed until Phase I-A

E.
Transportation Narrative

Transportation Narrative

Vanasse Hangen Brustlin, Inc. (VHB) has completed a Traffic Impact and Access Study for Phase 1-AA of the *Planned Unit Development (PUD) Preliminary Master Plan, Assembly Square, Somerville, MA*. As described in the Executive Summary, the project involves the construction of a 340,000 sf IKEA store relocated away from the Mystic River water's edge and the construction of a new roadway, Assembly Square Drive, which will become the main boulevard of the fully built out Assembly Square. As required by the Somerville Zoning Ordinance, VHB prepared a comprehensive Traffic Impact and Access Study for this project including an estimation of peak hour traffic volumes as compared to existing volumes and projected future conditions.

The Traffic Impact and Access Study for Phase 1-AA was prepared using the base data collection and traffic analysis gathered as part of the PUD traffic study. Accordingly, the same traffic study area used in the PUD traffic study was used for the current Phase 1-AA assessment.

As a condition of the Planning Board's decision on the PUD Preliminary Master Plan (December 14, 2006), the Traffic Impact and Access Study will be revised and expanded prior to Phase 1-A (the first mixed-use phase of the Assembly Square redevelopment). To this end, in recent months VHB has attended a series of meetings with the City of Somerville staff and its traffic consultant to address the peer review comments on the initial Traffic Impact and Access Study submitted as part of the PUD. As part of this process, differences in analytical methodologies suggested by the City's consultant as compared to those used by VHB are being discussed so as to reach a consensus on the appropriate assumptions to be used in the revised and expanded subsequent study. Furthermore, as required by both the City of Somerville and the Executive Office of Energy and Environment, VHB is expanding the study area to include additional locations, both within Somerville and in the adjacent communities of Boston and Medford. Independent of this current Phase 1-AA traffic study submittal, a revised and expanded Traffic Impact and Access Study for the overall project will be provided to the City for review as part of the Phase 1-A submittal for the Assembly Square redevelopment. That subsequent traffic study will also specifically address the comments expressed in the Peer Review of Preliminary Master Plan - Assembly Square Mixed-Use Redevelopment by Fay Spofford & Thorndike (December 16, 2006).

The Phase 1-AA assessment considered existing conditions, as identified in the PUD traffic study, and future 2011 conditions both with and without the Project. Existing traffic volumes were projected forward to design year 2011 using growth factors identified by VHB for this region, and by adding traffic generated by specific nearby background development projects. Because Phase 1-AA is expected to be constructed and occupied prior to the 2014 (just prior to the general timeframe previously identified for the opening of the new MBTA Orange Line station at Assembly Square) no credit was taken for potential public transportation usage. While nominal transit usage was considered in the PUD traffic study for existing conditions (due to bus ridership) and under future conditions, no transit reduction was applied to IKEA for the purpose of this Phase 1-AA assessment. This was specifically done as transit usage may already be inherent in the IKEA trip generation database used for this assessment. As the IKEA trip generation in this study was developed based on counts from sites already having some degree of transit usage, no further transit credit was taken so as to avoid any double-counting of transit trips.

Given the mixed-use nature of the full buildout Assembly Square redevelopment, there will be some shared business between the mixed-use components of the overall Assembly Square development with the surrounding uses. Likewise, some degree of shared traffic can reasonably be assumed between the proposed IKEA and existing nearby commercial uses within Assembly Square. While these shared trips represent new traffic to the individual uses, they do not represent new vehicle trips on the surrounding roadway network, aside from having an impact on the internal site driveways. However, for Phase 1-AA no credit was taken for this internal “capture rate”, resulting in a conservative analysis.

Not all of the vehicle trips generated by the IKEA store will be new traffic that is added to the study area roadways. Retail uses typically attract a significant percentage of their traffic from the traffic streams passing the site, particularly during peak periods. These trips, which are considered pass-by or diverted-link trips, are already on the roadway system traveling to and from locations other than the site (such as home, work or other shopping destinations). In Massachusetts, a pass-by rate of 25% is considered the standard in accordance with EOEA/EOT guidelines. However, given the unique nature of the IKEA use, a pass-by rate of only 13% was used for IKEA-generated traffic so that a conservative analysis of the overall project impacts would be provided. Documentation of this pass-by rate has been provided to the City’s peer review consultant for consideration and they have since indicated that this rate is appropriate.

The resulting IKEA trip generation and the former IKEA Waterfront Project trip generation (including the office and retail/restaurant components) are compared below in Table 1. Specifically, the two projects are compared in terms of weekday daily traffic, weekday evening peak hour traffic, Saturday daily traffic, and Saturday mid-day peak hour traffic generation. The weekday morning peak hour time period is not included in Table 1 because the Traffic Impact and Access Study for the former

Waterfront IKEA Development did not analyze the weekday morning peak hour. However, under either scenario, the IKEA store would not be anticipated to generate significant volumes of traffic during the weekday morning peak hour. To provide for a clear comparison, only total vehicle trips are compared in Table 1. In the actual capacity analysis presented in the Phase 1-AA Traffic Impact and Access Study the 13-percent pass-by rate discussed earlier was utilized.

Table 1
Trip Generation Comparison –
Previous Proposed IKEA Development vs. Currently Proposed Phase 1-AA Development
Total Vehicle Trips

	<u>Previous Proposed IKEA¹</u>			<u>Current Proposed Phase 1-AA²</u>	<u>Trip Generation Reduction</u>	
	IKEA +	Office/ Retail	=Total	IKEA	Volume	Percentage
Weekday Daily	6,840	4,490	11,330	6,180	– 5,150	– 45%
Weekday Evening peak hour	525	515	1,040	475	– 565	– 54%
Saturday daily	11,800	3,300	15,100	10,510	– 4,590	– 30%
Saturday midday peak hour	1,465	350	1,815	1,005	– 810	– 45%

1 Source: "Final Environmental Impact Report - IKEA at Assembly Square", Fort Point Associates, Inc., with Transportation Chapter by Vanasse Hangen Brustlin, Inc. Watertown, MA (October 2002).

2 Source: Traffic Impact and Access Study - Assembly Square Redevelopment - Phase 1-AA; Vanasse Hangen Brustlin, Inc., Watertown, MA (July 2007).

As Table 1 indicates, Phase 1-AA as currently proposed will generate between 30 percent and 54 percent less traffic than the volumes projected for the previous Waterfront IKEA development proposal. This is based on a direct comparison of the total vehicles trips (without any pass-by, transit or other credits) associated with the former Waterfront IKEA project and the current Phase 1-AA proposal. The trip generation calculations conducted for the former Waterfront IKEA in 2002 were based on counts obtained at five existing IKEA stores in North America. Since that time the database was updated and refined to include more representative IKEA stores similar to that proposed in Somerville. As a result, significantly smaller stores were removed from the database while similarly sized, transit-oriented sites were incorporated into the updated trip rates. The resulting seven-store database used for



the Phase 1-AA projections shown above includes similarly sized stores located in an environment similar to Assembly Square. Even though the current Phase 1-AA development will generate significantly less traffic compared to the former project, the Proponent is committing to implement as part of Phase 1-AA the same general traffic mitigation plan that was required by the City of Somerville for the former Waterfront IKEA development. That mitigation plan was designed to mitigate the traffic impacts of not only the IKEA store but 208,000 sf of office space and almost 49,000 sf of additional retail/restaurant space included as part of the previously approved project. Accordingly, the planned mitigation measures for the former IKEA proposal should readily mitigate the traffic impacts associated with the currently proposed Phase 1-AA development program.

To mitigate the Project's traffic-related impacts, the following improvements will be implemented by the Proponent:

- **Mystic Avenue northbound at Lombardi Street/Assembly Square Drive** – installation of new mast arm signal supports, signal heads, loop detectors, and pedestrian amenities.
- **Broadway at Lombardi Street** – installation of vehicle loop detectors, new signal heads, upgraded pedestrian signal infrastructure, new emergency vehicle pre-emption, restriped pavement markings and interconnection to Mystic Avenue northbound at Lombardi Street/Assembly Square Drive.
- **Mystic Avenue northbound and Mystic Avenue southbound U-turn underpass** – installation of traffic signal to operate under the same signal controller as the Mystic Avenue northbound at Lombardi Street/Assembly Square Drive intersection.
- **Mystic Avenue northbound at New Road** – replacement of existing traffic signal controller, installation of new mast arm signal support facing Mystic Avenue northbound, new signal post for the New Road approach, loop detectors, and pedestrian amenities. Conduit will be provided extending down New Road to interconnect this location to the previously mentioned signals as part of a closed-loop system.
- **Middlesex Avenue at Foley Street** – replacement of inoperative existing traffic signal controller, installation of new mast arm signal support facing Middlesex Avenue traffic in both direction, new signal posts for the Foley Street approach, loop detectors, and pedestrian amenities. Conduit will be provided extending down Foley Street to interconnect this location to the previously mentioned signals as part of a closed-loop system.
- **Assembly Square Drive at New Road/IKEA Way** – installation of a new traffic signal to be interconnected with the locations listed above as part of a closed-loop system. These improvements are shown in the accompanying Phase 1-AA Roadway Improvement Project plans for Assembly Square Drive.
- **Route 28 South at Mystic Avenue** – safety improvements including installation of mast arm signal support and new LED signal faces for the Route 28



southbound approach and Mystic Avenue northbound approach.

- **Route 28 at Assembly Square Drive** – while the analysis presented in the Traffic Impact and Access Study indicates improvements to this location are not necessary until later phases of the project, mitigation will be implemented by the Proponent as part of Phase 1-AA. Specifically, this intersection will be reconfigured so as to allow exiting left turns from Assembly Square Drive onto Route 28. This mitigation will require the installation of new signal equipment, as well as physical modifications to the adjacent Route 28/Middlesex Avenue intersection. The Middlesex Avenue improvements are needed to maintain the existing Route 28 left-turn storage bay lengths. As new pedestrian crosswalks and phasing are planned for Route 28/Assembly Square Drive, the pedestrian amenities at Route 28/Middlesex Avenue will also be revisited to help ensure that appropriate pedestrian accommodations are provided at both locations.
- **Assembly Square Drive reconstruction** – this phase of the project includes reconstruction and improvement of Assembly Square Drive to provide access through the entire Project Site and provide a seamless connection between Route 28 to the north and Mystic Avenue to the south. As shown on the accompanying Phase 1-AA Roadway Improvement Project plans for Assembly Square Drive, this roadway will feature landscape amenities, bicycle accommodations, and sidewalks while accommodating vehicular traffic within the four-lane cross-section planned (with turn lanes being provided as needed at the various intersections).

In addition to the analysis of the off-site locations considered in the study area, VHB also conducted a detailed analysis of traffic operations along Assembly Square Drive. Using the same growth projections and analysis assumptions discussed earlier, VHB analyzed the various significant intersections along the newly reconstructed Assembly Square Drive. The resulting analysis indicated that signalization was warranted at the intersection of Assembly Square Drive with New Road and the newly proposed IKEA Way. The subsequent analysis indicated that this intersection would operate at LOS B during the weekday morning, weekday evening, and Saturday midday peak hours under the 2011 Build condition. The proposed intersection configuration was developed to be able to accommodate the future traffic volumes associated with the planned future mixed-use development to the northeast of this location.